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Journal of the Society of Arts.

FRIDAY, MAY 10, 1861.

INTERNATIONAL EXHIBITION OF 1862.—GUARANTEE DEED.

The Council beg to announce that the Guarantee Deed is now lying at the Society's House for signature, and they will be much obliged if those gentlemen who have given in their names as Guarantors, will make it convenient to call there and attach their signatures to the Document. Signatures for sums amounting in the aggregate to £395,000, have already been attached to the Deed.

GUARANTEE FUND FOR THE EXHIBITION OF 1862.

The following additions have been made since the last announcement, in the *Journal* for May 3 :—

NAME.	AMOUNT.	REPRESENTING THE OBJECTS OF THE SOCIETY—ARTS, MANUFACTURES, AND COMMERCE.
J. Passmore Edwards, 166, Fleet-street, E.C.	£100	Arts.
Henry Bennett, 166, Gresham House, E.C.	200	Commerce.
Charles Clifford, Temple, E.C.	200	Arts.

By Order,

P. LE NEVE FOSTER, *Secretary.*

INTERNATIONAL EXHIBITION OF 1862.

Her Majesty's Commissioners for the Exhibition of 1862 have received information that the following arrangements have been made in foreign countries to represent the interests of intending exhibitors :—

Portugal.—A commission has been formed, of which his Majesty the King, Dom Fernando II., is president, and Counsellor Joaquim Larcher, Director General of the Department of Commerce and Manufactures, is secretary.

Belgium.—A commission of 18 influential gentlemen has been formed, of which Le Sieur Dulieu, Chef de Bureau au Ministère de l'Intérieur, is the secretary.

Wurtemburg.—Doctor von Steinbeis, Director of the Central Board of Commerce and Industry, will represent this state.

In Baden—The Grand Ducal Department of Commerce (Handels Ministerium).

In Hesse Cassel—The Commission Electorate of Commerce and Industry at Cassel.

In Lubeck—The Town Office, Stadt Aust, will act as commissioners.

CONVERSAZIONI.

The first Conversazione of the present Session was held at the Society's House, on Saturday evening last, when the whole of the Rooms were thrown open. In the Great Room were hung the pictures by the late John Cross, of which a list was given in last week's *Journal.*

Arrangements were made by which Mr. Ladd was enabled to exhibit Bunsen and Kirschoff's Spectrum experiments. These experiments are of a peculiarly interesting and important character, and have already led to the discovery of a new metal. Messrs. Smith and Beck, Messrs. Powell and Lealand, and Mr. Baker, each exhibited Binocular Microscopes, constructed upon the principle recently perfected and given to the world by Mr. F. H. Wenham. The binocular arrangement of the microscope is probably the greatest optical improvement that has been made for many years past, as it does for the microscopic object what the stereoscope does for the photographic image, viz. :—enables it to be seen in its true form.

Mr. Charles Jones exhibited, in the Great Room, a Series of Transparent Photographs, which were projected on to a screen, 20 feet square, by means of the oxy-hydrogen light. The subjects shown comprised views in the Holy Land Italy, France, &c., and groups of statuary.

Mr. Thomas Battam, jun., exhibited several Etruscan Vases, being reproductions from originals at the British Museum and in other collections, illustrating the perfection to which fictile manufactures have now attained.

Mr. Richard A. Green contributed a Case of Jewellery principally of classical design.

Mr. Coryton exhibited Models of his Wave-Line system of constructing Vessels, of which an account will appear in a future number.

Mr. West contributed Specimens of his Fluid Compass, in which compensation for expansion and contraction in the fluid is provided for by the introduction of a corrugated diaphragm at the bottom of the box.

Some of Mr. Abel's Fuses, for firing mines and cannon, were exhibited by Mr. Ladd. These fuses require only a very weak electric current to ignite them.

Mr. Maillard exhibited his Chronometer Compass and Diagrams for determining the longitude.

Dr. Cattell exhibited specimens of purified gutta-percha and varnishes.

A Collection of Indian Paintings in Talc, remarkably highly finished, were contributed by Mr. Blair.

The Exhibition of Patented Inventions was arranged in the lower Room, and the various patentees attended to explain their models.

The thanks of the Council are due to those gentlemen who so kindly lent their specimens on this occasion.

The Second Conversazione of the present Session will be held on Saturday, the 1st June, at the South Kensington Museum. The card for this Conversazione will admit the Member and two ladies, or one gentleman.

LEGAL POSITION OF INSTITUTIONS.

The attention of the Council having been drawn to the fact that the present state of the law as regards Dramatic Copyright and Dramatic Representations is attended with inconvenience, in connection with elocution classes and entertainments at some of the Institutions in Union, a Committee has been formed to investigate the subject.

Any Institution that may have been threatened with legal proceedings, is requested to send a full statement of the facts of the case to the Secretary of the Society of Arts, for the information of the Committee.

THIRTEENTH ANNUAL EXHIBITION OF INVENTIONS.

The Exhibition was opened on Monday, the 1st of April, will remain open every day until further notice from 10 a.m. to 4 p.m., and is free to members and their friends. Members by ticket, or by written order, having their signature, may admit any number of persons. Members of Institutions in Union with the Society are admitted on showing their cards of membership.

TWENTY-FIRST ORDINARY MEETING.

WEDNESDAY, MAY 8, 1861.

The Twenty-first Ordinary Meeting of the One Hundred and Seventh Session was held on Wednesday, the 8th inst., John Crawfurd, Esq., F.R.S., late Governor of Singapore, in the chair.

The following gentlemen were proposed for election as members of the Society:—

Atkins, John P.	Halstead-place, Sevenoaks, Kent.
Barnett, George Henry	42, Wilton-crescent, S.W.
Boyes, John	8, Kensington-garden-terrace, W.
Brown, Edward	East-hill, Wandsworth, S.W.
Chomel, J. A.	4, St. James's-street, S.W.
Cohen, Barnet Solomon	9, Magdalen-row, Goodman's fields, E.
Douglas, Sir Charles, K.C.M.G., M.P.	27, Wilton-crescent, S.W.
Garnett, William J., M.P.	21, Grosvenor-place, S.W.
Goff, Joseph, Jun.	Little Cashiobury, Watford.
Goldsmid, Frederick, D.	50, Harley-street, W.
Gridley, Captain H. Gillett	49, Wilton-crescent, Belgrave-square, S.W.
Hamilton, Sir Robert N. C., Bart.	129, Park-street, Grosvenor-square, W.
Howard, Sir Ralph, Bart.	17, Belgrave-square, S.W.
Innes, John, Jun.	46, Porchester-terrace, W.
Jackson, Richard Medland	45, Piccadilly, W.
Knight, Valentine	3, Cornwall-terrace, Regent's-park, N.W.
Losada, J. R.	105, Regent-street, W.
Marjoribanks, Edward	34, Wimpole-street, W.
Meekins, T. Mossom, B.A.	32, Lincoln's-inn-fields, W.C.
Moreton, Hon. A.H. Macdonald	112, Gloucester-place, Portman-square, W.
Neal, John	16, St. James's-place, S.W.
Palliser, Captain Arthur	70, Inverness-terrace, Kensington-gardens, W.
Park, Lieut.-Colonel Archibald	41, Porchester-square, W.
Petrie, Samuel	46, Ebury-street, S.W.
Reid, Lestock Robert	122, Westbourne-terrace, Hyde-park, W.
Rennie, George Banks	39, Wilton-crescent, S.W.
Routledge, G. F.	21, Kensington-park-gardens, W.
Scott, J. S.	46, Kensington-park-gardens, W.
Sibthorp, Henry A. M. Waldo	57, Chester-square, S.W.
Sparkhall, Edward	142, Cheapside, E.C.
Tayler, James George	23, Norfolk-crescent, Hyde-park, W.

The following candidates were balloted for and duly elected members of the Society:—

Baker, John	16, Brunswick-sq., Brighton.
Beddoe, William	4, Honey-lane, Cheapside, E.C.

Campbell, R. J. R.	62, Moorgate-street, E.C.
Carter, William	Ebbw Vale Co., 7, Lawrence Pountney-hill, E.C.
Clarke, David Ross	31, New Broad-street, E.C.
Douglas, John D.	166, Fenchurch-street, E.C.
Edmondson, John B.	3, Broughton-terrace, Great Clowes-street, Manchester.
Fernie, Ebenezer Waugh	Highfield, Berkhampstead.
Fletcher, Joseph	Whitehaven.
Fox, Edwin	4, Cullum-street, E.C.
Hancock, Frederick Wm.	4, Adams-court, Old Broad-street, E.C.
Jewesbury, H. W.	2, Mincing-lane, E.C.
Jones, William Charles Hussey	Leeswood Green Collieries, near Mold.
Montgomerie, Hugh Edmondstone	17, Gracechurch-street, E.C.
Palmer, Edward Howley	11, King's Arms-yard, E.C.
Pearce, William	Springfield, near Poole, Dorset.
Pellas, C. A.	42, St. Mary Axe, E.C.
Reed, Richard Kingsford	110, Grange-road, Bermondsey, S.E.
Richardson, F.	7, Mincing-lane, E.C.
Rimington, Alexander	Frognalls, Hampstead, N.W.
Socher, F. A. de	28, Clement's-lane, Lombard-street, E.C.
Sparks, William S.	28, Conduit-street, Hanover-square, W.
Thorne, Augustus	4, Cullum-street, E.C.
Thurburn, Robert	5, Crosby-square, E.C.
Tomlins, P. N.	Painters' Hall, Little Trinity-lane, Cannon-street, E.C.
Twentyman, Alfred G.	Tettenhall, near Wolverhampton.
Ward, John	5 & 6, Leicester-square, W.C.
Watson, J. Y.	Effra-house, Brixton, S.

The Paper read was—

ON THE TRADE AND COMMERCE OF THE EASTERN ARCHIPELAGO.

By Peter Lund Simmonds.

Commerce and geographical research have made great strides in the last ten or twelve years, but we have much yet to learn and to carry out in both these fields of operation. Having spent millions in the prosecution of researches in the Arctic and Antarctic regions, fraught with little benefit to the world at large, our enterprising travellers and merchants are now wisely concentrating their labours and outlay upon more profitable fields of inquiry. The continents of South America, of Africa, and Australia, and the great Empire of China, offer better prospects of success for exertions, whether for mere fame and adventurous exploration, or the more attractive advantages of trade profit, in the discovery of new and useful products, or fresh outlets for our commerce and manufactures.

In the list of premiums announced by the Highland and Agricultural Society of Scotland this year, I perceive a gold medal offered for an approved report on the hardy and useful herbaceous plants, including grains and grasses of China, Japan, the Islands of the Eastern Archipelago, and South Seas, the Himalaya country, &c.

There is one extensive and populous field—the great Indian Archipelago—which is comparatively unknown to the mass of the British people, but which has of late years been opened up to us, and certainly offers great advantages for the future extension of trade and commerce. Of the interior of many of those fine islands, of the extent of their population, and of the nature of their products, we absolutely know nothing. It is rather, however, with the desire of stimulating inquiry than in the hope of adding much that is new to our stock of information, that I have undertaken to open up the discussion by a paper on the Trade and Commerce of the Eastern Archipelago. With a gentleman occupying the chair who is so well informed on this subject, who has a world-wide reputation for his labours and his writings on Eastern geography and trade, and whose experience extends over nearly half a century, I may even be considered bold in attempting it.

But while there have been issued, from time to time, numberless publications devoted to this interesting region, they are for the most part special in their object, and scarcely serve to give anything like a popular bird's-eye view of the commerce of the countries comprehended within the area. Not that I can expect to give, in the brief time allotted me, anything like a comprehensive digest of a field on which Mr. Crawfurd has published a work in three volumes, and more recently a descriptive dictionary extending over 450 pages. Having, however, paid some attention to the trade products of the far East, the commercial statistics of that quarter, and the various publications issued, I will endeavour to place before the members, in a condensed form, some of the most interesting details connected with a few of the principal islands of the group.

The islands comprised under the collective term of the Indian, Asiatic, or Eastern Archipelago, are supposed to number upwards of seven or eight thousand, many of them of great extent, with a numerous population. Although there are no very specific data to guide us in estimating the aggregate population of these islands, it may be fairly assumed at 30,000,000 of persons. The Dutch and the Spaniards exercise the principal jurisdiction among these islands, for the British settlements comprise only Singapore, and the small island of Labuan, if we except Sarawak, which is disclaimed by our Government.

The direct British trade with the far East is at present only on a limited scale, but there is every reason to believe that it may be very largely extended year by year, as there is a constant demand for new commercial products, very many of which are to be obtained in that quarter in great abundance.

The value of the exports of the produce of the United Kingdom to this Archipelago, in 1859, was as follows:—

To Singapore	1,421,067
Java	1,135,071
Philippines	685,490
Celebes	372
	£3,242,000

And of the imports direct:—

From Singapore	1,108,235
Java	250,320
Philippines	756,576
Borneo	11,218
	£2,126,349

With Borneo and Celebes a small direct trade has sprung up within the last three or four years.

The whole present expenditure for Consular salaries in this wide and prolific field of trade is but £2.800 a year, namely, £500 to the Consul General of Borneo; in the Philippines, £1,000 to the Consul, and £300 to the Vice-Consul at Manila, and £400 each to Vice-Consuls at Sual and Iloilo; at Java, £200 a year to the Consul at Batavia. The Consuls at Surabaya and Samarang, who received £200 per annum each, have this year been done away with. Now we spend more than this for consular services in the Pacific, though the British trade there is certainly not to be compared in extent and value with that of the Eastern Archipelago. The salaries paid to Consuls in the Pacific are Sandwich Islands £1,000; Feejee, Tahiti, and Society Islands, each £500; and Navigators' Islands, £450; total, £2,950.

The tables, Nos. 1 and 2 show the entire area of the islands of the Indian Archipelago as far as it is possible to arrive at it, and that of the islands and parts of islands con-

sidered by the Dutch to belong to them. From this statement, taken from an official periodical published in Holland, it appears that five-sixths of the whole Archipelago are regarded as Dutch possessions, and that amongst them are included all Sumatra, with the exception of Acheen and Siak; three-fourths of Borneo, that is, the whole island, with the exception of the north-east peninsula and a narrow band along the north-west coast, terminating at T. Datu; the whole of Celebes, Bali, Lombok, &c. It would be interesting to know whether the British Government is in possession of copies of all the treaties and acts of cession, on which the right to all the parts of this magnificent colonial empire that have been acquired since 1824 is based.

TABLE I.—SUPERFICIES AND POPULATION (AS FAR AS CAN BE ESTIMATED) OF THE INDIAN ARCHIPELAGO.

NAMES.	SQUARE GEOGRAPHICAL LEAGUES.	POPULATION.
SUMATRA	8035·0	2,500,000
Islands along the W. Coast of Sumatra:—		
Pulo Babi	30·0	
Pulo Nias	75·	
Pulo Mintao, or Siberu	30·	
Sepora Islands	75·	300,000
Poggi ,,	35·	
Engano and other small Islands	25·	
JAVA	2313·	12,000,000
MADURA	97·3	
Islands near the Coast of Java:—		
Pulo Bawean, and Kangeang Isles	21·9	
Islands in Straits of Sunda, the Krimon-Java Islands, &c.	12·4	
BANKA	223·	49,500
BILLITON	119·	12,864
Islands near Billiton, in Straits of Gaspar Banka	7·	
Archipelago of Rhio and Linga:—		
Bintang	21·	30,000
Linga	17·9	
Battam	8·0	
Sinkep	9·5	
Johore Archipelago	36·0	10,000
BORNEO	12743·1	1,800,000
Islands along the W. Coast of Borneo:—		
Pulo Buang Orang, or Great Natuna	29·	
Islands near Great Natuna	1·	1,600
South Natuna Islands	4·	
Pulo Jimaja	3·5	
Pulo Mata	2·	
Anambas	4·7	
Tambelan, or Timbalan, Islands	7·	1,000
Carimata, &c.	8·	
Other small Islands near the W. Coast of Borneo	6·	
Pulo Laut	45·	
Islands along the E. Coast of Borneo:—		
Pamaruang	30·	
Balabalaga	6·	
Maratua	21·	
Tarakkan Leegetan, &c.	16·	
Sulu and Basilan Islands:—		
Sulu	18·	60,000
Other Sulu Islands	3·3	
Tapul Islands	5·2	
Pangutaran Islands	5·	
Samar Laut Islands	2·5	
Basilan	22·2	
Islands near Basilan	1·5	
Tawi Tawi Islands	26·	
Islands near N. point of Borneo:—		
Cayagne, Caluja, Cavilli, St. Michel, and Cayagan-Sulu	2·4	
Balabak, Banguey, &c.	26·3	
CELEBES	3578·0	1,100,000
Bouton	86·2	60,000
Pengasan	46·5	
Other Islands to the S. and W. of Celebes:—		
Tukan-besi, Kambyna, Saleyer, and Islands to the S. of it	45·	
Islands to the W. of Celebes.	9·	
Islands along the E. Coast of Celebes:—		
Xulla and Bangaai	113·0	12,000
Islands of the Bay of Gorontala	10·	
Islands to the N. of Celebes:—		
Sangir	13·	
Siauw, Tagolanda, Bejaren, &c.	7·	
Talaut, Meaugis	18·	
BALI	105·3	700,000
LOMBOK	103·5	450,000
SAMBAWA	278·	
FLORIS or ENDE	252·	
Islands to the E. of Floris:—		
Comado and other Islands in the Straits of Sapri	16·	
Adenara	8·	
Solor	5·	
Lombatta	24·8	
Putare	13·1	
Ombaai	45·8	
Other Islands	1·5	
TIMOR	613·	1,646,605
Islands to the W. of Timor:—		
Samao	8·4	3,000
Rotti	30·8	
Savu	11·3	5,000
Other Islets	5·5	
SUMBA or SANDALWOOD	236·5	
Islands of the S. W., Wetter, &c.	110·0	82,000
Tenimber Islands	150·	22,000
Arru or Aroe Islands	65·	80,000
Kei Islands	60·	
Islands of the S. E.	14·	
Islands of Banda	1·1	5,200
CERAM	309·0	25,000
BURU or BOURO	164·	
Islands S. and W. of Buru:—		
Amboyna	13·3	188,728
Other Islands	5·0	
Obie Besar	39·	
Islands near Obie Besar	7·	
HALMAHERA or GILOLO	313·5	5,000
Islands near Gilolo:—		
Batchian	50·0	
Ternate	0·7	89,076
Tamally, Mandoli, Latta, Tidore, and other Islands	48·8	
Waigin	60·	
Battanta	13·	
Salawattie	33·	
Misole	37·	
Islands near these	30·	
TOTAL	31428·	21,238,573

It will be remarked that the Malay Archipelago, the Philippines, and New Guinea, are not included in this table.

In an investigation of the trade of the Eastern Archipelago, our first inquiry must be with the island of Singapore, which is the great commercial emporium of that quarter, and which owes its prosperity not only to its convenient situation, but also to its being a free port, without any charge whatever, except a small one for light dues, from which even native vessels are exempt.

Two years after its establishment, the fixed inhabitants of Singapore numbered but 12,000; now they have risen to 80,000, of whom about 50,000 are Chinese. 8,000 or 10,000 Chinese arrive every year; these either settle in Singapore or proceed to Malacca. Singapore produces annually and ships about 5,000 tons of gambier, better known in England as Terra Japonica, 6,000 or 7,000 tons of sago and sago flour, and 1,250 tons of pepper. Being also the entrepôt of the Eastern Archipelago, all the products of the various islands are received there for shipment to Europe. Some 2,000 or 3,000 prahus and junks visit the port annually from Bali, Borneo, Celebes, Sumatra, Java, and the neighbouring islands, from China, Siam, and other parts of the Continent.

The Bugis trade, commencing in September and ending in November, is generally esteemed by the local merchants as second only to the trade with China. The junks from China are a larger class of vessel and of considerable burthen. Singapore is also largely frequented by square-rigged vessels. About 700,000 tons of shipping annually enter the port. The number of square-rigged vessels which arrived at Singapore during the official year 1858-59 amounted to 1579, (of which 1,027 were British), with an aggregate tonnage of 650,285. This was in excess of the number of the previous year by 171 vessels and 63,358 tons. The number of vessels which sailed from Singapore in 1858-59 was 1,239 (British 692), with a tonnage of 467,887, showing an increase compared with the preceding year of 203 vessels and 66,083 tons. In 1858 the value of the imports was £6,700,000, and of the exports £5,783,600. In 1859 the aggregate value of the trade was rather less, being only eleven millions sterling.

The great extension of British trade with China, Siam, Java, Borneo, Japan, and other Eastern countries, has greatly benefited Singapore, which may be looked upon in the light of a large bonded warehouse.

Already the trade of Singapore is more than a third of that of Bengal, and the resources of the whole eastern part of the Continent and Archipelago when developed must flow through it. There exists no reason why the trade which in 40 years has increased eleven fold, should not in the remaining forty years of the century be at least tripled. Governed as a separate colony, with a strong municipality, Singapore in the year 1900 may be the bonded warehouse of all Southern Asia and the East, the exchange for a trade of 50 millions sterling a year.

SINGAPORE EXPORTS

TO GREAT BRITAIN.	1860.	1859.
Gambier piculs, 133 lbs.	164,510	171,907
Tin ,,	12,645	19,717
Sago flour ,,	101,883	90,557
Pearl sago ,,	29,833	44,105
Black pepper ,,	52,998	45,817
Tortoise-shell, catties	6,581	5,680
Mother-o'-pearl shells, piculs	331	688
Gutta percha, piculs	21,076	14,787
Nutmegs and mace, piculs	543¼	505
Camphor piculs	445	—
White pepper ,,	12,522	13,764
Benjamin ,,	602	50
Gamboge ,,	75	45
Antimony ore ,,	53,230	—
Coffee ,,	9,726	16,647
Sapanwood ,,	13,010	30,790
Sticklac ,,	551	150

SINGAPORE EXPORTS.

TO THE CONTINENT OF EUROPE.	1860.	1859.
Tin piculs	5,041	2,446
Gambier ,,	44,414	30,350
Pearl sago ,,	13,853	8,816
Sago flour ,,	4,523	202
Cassia ,,	550	417
Black pepper ,,	30,720	24,076
White pepper ,,	1,706	439
Tortoise shell ,,	2,108	—
Gutta percha ,,	234	—
Coffee ,,	11,796	8,547
Sapanwood ,,	2,046	2,678

To India—specie and bullion: gold dust and bars, value, 94,855 dols.; dollars, no., 167,163; rupees, no., 36,221: other treasure, 341,094 dols. Japan copper, 110 piculs; black pepper, 8,858 piculs; tin, 4.073 piculs; gambier, 5,928 piculs; alum, 783 piculs; camphor, 1,102 piculs; sapanwood, 34,392 piculs.

To China the exports for 1860 were—opium, Patna, 59 chests; Benares 194; Malwa, 70. Cotton, 18,399 piculs; black pepper, 3,779; betelnut, 17,491; rice, 429,127; rattans, 13,245; ebony, 2,839; and sapanwood, 4,105 piculs.

To United States in 1860—gambier, 76,840 piculs; tin, 9,353; sago flour, 4,815; pearl sago, 1,145; black pepper, 23,066; cassia, 236; gutta percha, 75; nutmegs and mace, 457½; camphor, 41; india-rubber, 463; coffee, 7,240; sapanwood, 1,187 piculs.

The revenue of Singapore for the last official year was £77,466, being less than the preceding year by about £8,000. The expenditure amounted to £97,105. There is thus an apparent deficiency of about £19,640. The official returns of the trade of Singapore for the year ending 30th April, 1860, make the amount of imports £4,719,914, being less than that of the previous year by £958,970. The exports were to the value of £5,651,388, showing an increase over those of the previous year of £522,731. No statements have yet been published giving details of the trade or of the shipping which arrived at or departed from Singapore during the year. From the monthly statement of the trade of Singapore published in the *Free Press*, we find that the value of the imports up to the end of 1860 was estimated at 25,130,681 dollars, being an increase over 1859 to the extent of 1,194,725 dollars. The value of the exports in 1860 is put down at 19,780,612 dollars, being less than in 1859 by 2,874,851 dollars. The imports were brought as follow, by

1,067	square-rigged vessels . dols.	21,273,772
2,325	native ,, . .	3,856,909
3,392		25,130,681

The exports were taken as follows, by

1,092	square-rigged vessels . .	16.345,642
2,647	native ,, . .	3,434,970
		19,780,612

The past year (it is observed) was, on the whole, an unfavourable one for the trade of Singapore. There was a considerable falling off in the exports of several articles of produce, such as tin, gambier, sago, coffee, sapanwood, &c., while there was very little speculation in rice as compared with the two preceding years. The state of affairs in China operated very disastrously to the Chinese merchants engaged in extensive transactions between Singapore and that country, and the trade with Siam also seems to have been overdone in past years, and there was consequently a reaction in 1859 and 1860, many of those who had entered into it largely making heavy losses. During the latter part of 1860 a number of failures also occurred among the Chinese traders.

The British goods sent to Singapore, in 1859, consisted

of arms and ammunition to the value of £19,000; copper, wrought and unwrought, £52,331; hardware and cutlery, £13,000; iron, £51,300; machinery, £7,250; telegraphic wire, £70,000; glass, £7,750; earthenware, £14.687; coals, £13,000; apparel, &c., £8,143; cottons and cotton yarn, £975,563; linens, £26,000; woollens, £62,274.

The greater portion of our cotton manufactures, sold in Singapore, are consumed in the less civilised quarters of the Indian Archipelago, where the natives prefer cheap goods and gaudy patterns, while those of Java select and prefer Dutch or Indian manufactures which, though dearer, are said to be more durable than British goods.

Our direct imports from Singapore, (taking the official returns of 1859 as an estimate,) are, of minerals, 860 tons of antimony ore, the produce of Borneo, and 17,549 cwt. of tin, chiefly from Malacca. Of animal substances, 10,000 or 11,000 cwts. of hides; 33,662 lbs. of silk, probably from Japan or China; 10,000 lbs. of tortoiseshell, and 1,373 cwts. of mother-of-pearl shells. Of dyestuffs and tanning substances, there were 132 cwts. of gamboge; 102 cwts. of stick-lac; 941 tons of cutch, and 9;161 tons of gambier—the terra japonica of commerce. Of elastic gums, 17,368 cwts. of gutta percha, and 1,114 cwts. of India rubber; of copal, about 68 cwts., and of unenumerated gums, 796 cwts. 10,000,000 rattans were received, and 899,000 other canes. Upwards of 34,000 cwts. of sugar, 175,000 cwts. of rice, and 1,704,000 lbs. of coffee; a considerable quantity of this coffee is brought from the north coast of Bali, the greater portion being smuggled from the eastern districts of Java, where coffee is a Government monopoly. 47,000 lbs. of nutmegs and 15,000 lbs. of mace, most of this the produce of Singapore, but some from the Eastern Islands, as the long and wild nutmegs. About 6,500,000 lbs. of pepper came through this channel, 9,513 lbs. of cassia oil, and 40,000 lbs. of other essential oils.

Singapore is at present the chief place of manufacture and principal mart for granulated sago and "sago flour," as it is termed in commerce, but in fact the fecula or ungranulated starch. The granulated fecula of sago of a dirty brown colour, used to be exported from the Archipelago in small quantities, but when the trade with Europe was thrown open, in 1814, the Chinese of Malacca began to prepare a superior article, known in commerce under the name of pearl sago. There are four or five species of palms which yield sago, the most cultivated of which are, however, the *Sagus Konigii* and the *Sagus laevis*. These palms are found in every part of the Malayan Archipelago and Philippines, as far as Mindanao, wherever there is a genial soil for them, and this soil consists of a marsh or bog, composed of decayed vegetables, near the sea. They are most abundant in the eastern parts of the Malay Archipelago, at the Moluccas and neighbouring islands, with New Guinea and Borneo, and in the Philippines at Mindanao. In all these they are more or less the bread of the inhabitants. These palms propagate themselves by lateral shoots, as well as by seed, and they die after producing fruit. From the first of these properties it follows that a sago plantation, once formed, is perpetual.

The sago tree, when cut down and the top severed from it, is a cylinder about 20 inches in diameter, and from 15 to 20 feet in height. The contents would, therefore, be nearly 26 bushels, and allowing one-half for woody fibre, there will remain 13 bushels of starch, or say 700 lbs. It may give some idea of the enormous rate of this produce, if it be considered that three trees yield more food matter than an acre of wheat, and six times more than an acre of potatoes. It is far from being either so palatable or nutritious as it is prolific, and is never preferred, even where it is most abundant, to rice.

All the raw sago manufactured at Singapore is brought from islands to the eastward, principally from the North-West Coast of Borneo and the North-Eastern of Sumatra, with its adjacent islands from Siak to Indragiri, but a considerable portion comes from places more than 1,000 miles distant. This article is very easily prepared for exportation in its raw state; the tree is cut down, then the pith or cellular tissue is taken out, and made up into bundles. In this form some 15,000 or 20,000 tons are annually imported at Singapore, where it is prepared by the Chinese, who clear the meal or farina from the fibres of the pith or cellular tissue, when the flour is either made up for exportation in its natural state or is granulated into pearl sago. The imports of sago have steadily increased, especially since the reduction of the duty to the nominal amount of 4½d. per cwt., in 1853. In 1830 the import and consumption of sago in the United Kingdom was only 3,000 cwt.; in 1841 it was 52,000 cwt. In 1850, the imports were 90,000 cwt., and in 1859, 168,805 cwt., valued at £140,000.

The trading prahus (commonly proahs) of the Malays, with the low fore ends, projecting stem and gallery, bamboo decks and mat sails; the Arab dows, with bowsprit and bow consolidated in one, coir rigging and hair cables, the odd-looking craft from Macassar, Celebes, and of the Bugis, all poop, and boats of most primitive build and uncouth rig, and the Chinese junks, give a singular appearance to the waters.

Some articles of their lading are curious, especially the food dainties. The widely-famed edible nests of the swallows, are torn from the recesses of the slimy caverns of Karong-Bolang, on the western coasts of Java, and destined to form a luscious potage for Chinese sensualists.

Sharks' fins and fish maws, trepang, a hideous sea slug, gathered on the reefs of New Guinea and Australia, dried cuttle fish and dried oysters, dried prawns, deer's sinews and dendeng, or sun-dried meat, seaweed and seaweed isinglass, and several other Oriental delicacies, are included in these cargoes, and regularly quoted in prices current, with all other descriptions of merchandise.

Agar-agar, an edible seaweed, much in use in the East, is obtained of the second quality from Macassar (Celebes). It is collected on the submerged banks by the Bajou Laut, or sea gypsies, as they are termed, for export to China. This fucus is much used for making a kind of jelly, which is highly esteemed by Europeans and natives for the delicacy of its flavour.

SUMATRA is about 1,000 miles in length, with an area reckoned at 128,560 geographical square miles, or half as large again as Great Britain. It was not until the restoration of their possessions in the Archipelago to the Dutch, in 1816, and especially since the convention with the English, in 1824, that the government of the Netherlands began to pursue a territorial conquest in Sumatra, through which they have become masters, at least nominally, of the whole of its coasts and islands, from Kampar, on the Straits of Malacca, to Singkel, on the western coast, bordering on the territory of Achin, with much also of the interior of the island.

The mineral products adapted to economical use hitherto discovered in Sumatra are coal, sulphur, naphtha, granite, marble, iron, and gold. Indications of copper have been discovered, but no mines of it have ever been worked. The iron ore is described as of fine quality, and iron and steel have been immemorially made from it by the workmen of Menangkabo, who have attained a local reputation for the manufacture of tools and weapons.

Gold is found in many parts of the interior, but seemingly not in such abundance as in Borneo, the Peninsula, or Celebes. I saw it stated some time ago that the coal mines of Indragiri, on the east coast, two or three days' sail from Singapore were about to be worked by the firm of Almeida and Sons, who had entered into an agreement with the sultan of that place. If this be so, Singapore will have three sources of coal supply within its immediate neighbourhood, the others being Labuan and Sarawak. As the coal from Indragiri can be brought to Singapore in native boats at a cheap rate of freight, the working of the mines in Sumatra will give a fresh impulse to steam navigation in those seas. Sumatra produces all the corn, pulse, farinaceous roots, and esculent fruits which belong to other portions of the western part of the

Archipelago. Its eastern coast, and the islands lying off it, are the chief source of the sago of commerce. Benzoin and Malayan camphor are peculiar to it and Borneo. Sumatra is the great source of black pepper, producing far more than all the other countries of India put together. Pepper is also grown in the Peninsula, Borneo, Java, and to a small extent in some of the Philippines. By far the largest supply is furnished by the western side of Sumatra, which exports it from no fewer than 14 different ports, the entire quantity being estimated at 22,000,000 lbs., and 9,000,000 is exported from the eastern side of the island. The Malay peninsula, Borneo, and the western part of Java, produce probably about 8,000,000 pounds more, bringing up the total supply from the East to about 40,000,000 lbs. Strangely enough, this spice is never used as a seasoning by the natives, nor do they appreciate the nutmeg or clove.

The Lign aloes, or eagle wood, agala, or Calamback of commerce, is obtained of a superior kind from Sumatra. If of good quality it should melt in the fire like wax, yielding an agreeable odour. Cotton grows in Acheen and Palembang, and samples were shown from thence at the Exhibition in 1851.

Of late years coffee has been raised in larger quantities than in any other island except Java, and this production has even extended to the native cultivators, so that the island promises to furnish an almost unlimited supply. The coco and areca palms grow well.

In Sumatra we meet with the Ejoo or Gomuti palm, there called Anau (*Arenga saccharifera*). It is one of the most useful and abundant of all the palms in the Eastern islands.

It grows 20 or 30 feet high, and yields bunches of small fruit, the interior of which are prepared and extensively used by the Chinese as sweetmeats. It is readily distinguished from other palms by its rude and wild aspect. The Portugese name for this tree is Sagweir; the Malays call it Gomute, and the Javanese Aren and Doh. (See Griffith's "Palms of British India," p. 164 to 235). It is chiefly an inhabitant of the mountainous ranges and narrow damp vallies of hilly countries. Plantations of it are abundant in Java. It is raised from the seed. The tree arrives at maturity in ten years, and is productive for about two. It yields several valuable products, among which are a species of tinder, a fibrous elastic material like horse-hair, and a large quantity of sap containing an abundance of saccharine, from which sugar is extracted and a fermented liquor or toddy is made. The Moormen are said to use the very thick fibres as pens. Like the true sago palm, the medullary substance affords a small but inferior quantity of farina. The fibre so much resembles horse-hair as scarcely to be distinguished from it. It envelopes the trunk of the tree, about the bases of the petioles of the fronds, and might be had in large quantities from Singapore, Sumatra, Amboyna, and other of the eastern islands. That of Java has a coarse ligneous fibre. It is, of all vegetable substances, the least subject to decay. The small cordage of most of the Malay proahs is made of it, and it is even manufactured into hawsers and cables, equally elastic with coir, and much more durable. They will float on the surface of water. Gomuti is generally sold in twisted shreds or yarns—often as low as 4s. a cwt. Were European ingenuity applied, says Mr. Crawfurd, to the improvement of this material, there seems little doubt that it might be rendered more extensively useful. This is probably the same tree from which the fibres, called Cabo-negro by the Spaniards, are procured at Manila, and from which they also manufacture rope. About two crops of this fibrous material are obtained from the palm during its lifetime, each averaging about 9 lbs. It is found between the trunk and branches, at the insertion of the latter, in a matted form, interspersed with long, hard, woody twigs, from which it requires to be freed. Underneath the hair-like material is found a third substance, of a soft gossamer-like texture, which is in large demand in China as tinder, and for caulking ships in the same manner as oakum. I have seen this palm growing in some parts of Jamaica, and I believe it is to be found in other of the West India islands.

According to Sir W. Hooker and the late Dr. Royle, no fibrous substance can rival in tenacity the Gomuti fibre, which is imported sometimes under the name of vegetable bristles. It resists wet to an astonishing degree, thus being particularly adapted for ships' cables and cordage. Each full-grown tree of this kind throws off about six leaves a year, which collectedly furnish 4½lbs. of Gomuti fibre — sometimes rather more. The fibre may also be removed without injury to the stem. They occasionally measure a yard in length. Three Russian hemp cables have been known to break under a strain which was resisted by a rope made of these fibres, a fact attested by one of the most celebrated ship-builders in Calcutta.

The island of BANCA has an area of about 3,568 square miles. There are timber trees of great size on it, some of them useful. The most valuable products of the forest for trade are *agila*, or eagle wood, ebony, and beeswax.

The bee of the Indian Archipelago does not make its nest in hives as in Europe, but suspends it from the branch of a tree, in which position they may be seen forming masses of considerable bulk. Certain trees become favourites, and are selected by them yearly for many generations, although often disturbed by the taking of their nests. These trees become private property among the Eastern tribes, and are handed down from father to son.

Banca is noted for its tin mines. The digging, washing, and smelting the alluvial tin ore, is entirely in the hands of the Chinese, who receive advances from the Dutch Government, which exercises a monopoly of the produce. The quantity produced in 1853 was no less than 5,540 tons, a quantity approaching nearly to the produce of our Cornish mines, (6,920 tons,) and, being all grain tin, superior to it in value. The government pays to the miner, on an average, about eight dollars for each picul of the metal. The finest ore yields as much as 80 per cent. of metal; the commoner sorts from 40 to 60.

BORNEO is undoubtedly the largest island in the world that can properly be called so, New Guinea alone approaching to it in magnitude, for it has a coast line estimated at 2,000 miles, and an area computed at 263,600 square miles, which will make it six or seven times the size of Java, and three or four times the size of Britain. There is much dispute as to the probable amount of the population. Mr. F. Boucher states it about 1,316,000, of whom the bulk, 1,000,000, are Dyaks or aborigines; 200,000 Chinese and Cochin Chinese, and 100,000 Malays. The Dutch functionaries compute the population under their rule (two-thirds of the whole island) at 1,348,000, and Mr. Crawfurd considers the entire population overstated at 1,800,000.

The whole island is covered with rank verdure, or a primeval forest of gigantic trees, the cleared and reclaimed spots forming but exceptional specks in this wild and unvaried landscape. The indigenous exchangeable vegetable products of Borneo are benzoin, eagle wood, native camphor, the sago palm, and rattans. In the general markets of the Archipelago, the rattans, the produce of Banjarmassin, on the southern side of the island, are more valuable by 7 per cent. than those of any other country.

Some imports have occasionally been received of a concrete oil termed Borneo vegetable tallow, which is obtained by boiling the cotyledons of an undefined tree. Dr. Adams ("Voyage of the *Samarang*") has referred it, certainly erroneously, to the fruit of one of the *Bassias*. The Borneo vegetable tallow is made up into large round flattened cakes, of the consistence and colour of cheese, and also in cylindrical masses, which have assumed the form of the bamboo joints into which it had been poured when in a liquid state.

Gold has been found in alluvial deposits on parts of the island. Antimony is obtained at Sarawak and Bintula. Coal crops out in various places on the north-western side

of the island, and again on the southern side of the island, and if these, as is probable, are the extremes of the same carboniferous formation, the coal-fields extend over about 8° of latitude and 2° of longitude, and, after those of North America, must be the largest in the world. The great importance of an adequate local coal supply in the Indian Archipelago cannot be over-rated, in view of the present steam navigation and its probable extension among the islands, on the coast, and up the Chinese rivers. Besides the British steamers, the Dutch, Spanish, Russian, and Japanese are daily extending their local steam-fleets, and even the King of Siam now owns several. Steam navigation will do more to promote trade and suppress piracy in the Archipelago than any other element.

In 1846, the value of the imports at Singapore from Borneo was £109,220, the principal items being, antimony ore, 20,190 piculs; betel-nut, 2,441; bird's nests, 180 piculs of black, and 6 of white; Malay camphor, 21 piculs; pepper, 2,900 piculs; rattans, 20,000 piculs; raw sago, 180,400 bundles.

In 1845, Sir James Brooke acquired of the Sultan, by cession, the fine province of Sarawak, on the western coast. This spacious and fertile district extends for nearly 100 miles in every direction from the town of Sarawak, and is in many respects extremely eligible as a site for a British settlement in Borneo. It is unnecessary here to go into the political bearings of the question, and to record the efforts which have been made, backed by mercantile representations from the leading manufacturing and commercial towns of the United Kingdom, to induce the Government to take over, under some pecuniary arrangement with Sir James, the control of Sarawak. This province is said to yield in abundance all the rich and varied productions of Borneo, of which many samples are placed before you this evening.

In illustration of its natural advantages, I may quote, from the "Journal" of Sir James Brooke, what is fully borne out by all who have visited and traded with it.

"For the country, what shall I say? I could not wish a richer; its soil is fine, and admirably calculated for the culture of rice, coffee, nutmegs, or cotton. There is a noble river flowing through the territory. The southern boundary is defended by a range of mountains of an elevation which affords an European climate; and the climate generally is healthy and cool. The mineral productions are rich. Then we have woods which would supply all the dockyards in Europe, and of the finest quality; for though we do not boast of teak, we have other timber equally hard and durable."

On the 22nd February this year, a grand *fête* was given at Sarawak, by Mr. Helms, the manager of the Borneo Company, to inaugurate the opening of their extensive steam-machinery. The machinery was set in work by Sir James Brooke, and worked admirably. It is calculated that this manufactory will turn out ten tons of sago flour or tapioca per diem. The process is similar to that of starch-making in England. It is simple, and promises to be very economical, compared with the rude process of the Chinese. Connected with this factory are extensive saw mills, &c. Great credit is due to the active manager of the company in Sarawak, for the successful erection of this complicated machinery under great difficulties. As soon as it was known that the company intended to manufacture tapioca, considerable quantities of the *haya ubi* were brought from the neighbouring islands, and its cultivation on a large scale has been commenced in Sarawak by Chinese, Malays, and Dyaks. The machinery is adapted to the manufacture of sugar, and the cultivation of sugar-cane is also being entered on with great zeal by the natives.

The steamer *Rainbow* now runs twice a week between Singapore and Sarawak, carrying the mails, passengers and light cargo, and this increased communication will do much to advance the interests of the settlement.

Ship-building is being prosecuted with spirit, and this branch of industry is capable of being largely developed, the forests of Sarawak affording inexhaustible supplies of suitable timber. A handsome schooner, of some 150 tons was lately launched at Kuching.

Subjoined is a statement of the trade of Sarawak for the last seven years. The result presented is satisfactory, but it would have been much more so had not the unfortunate suspension of the trade with Muka occurred last year:—

COMPARATIVE STATEMENT OF TRADE, REGISTERED AT THE PORT OF SARAWAK, EXCLUSIVE OF THE TRADE REGISTERED COASTWISE.

YEAR.	IMPORTS.		EXPORTS.		TOTAL.	
	Tons.	Value. Dollars.	Tons.	Value. Dollars.	Tons.	Value. Dollars.
1854	9,656	319,639	11,452	352,195	20,908	671,834
1855	10,750	304,764	11,794	315,757	22,544	620,521
1856	13,332	355,927	14,142	318,154	27,474	674,081
1857	11,611	282,572	11,424	252,333	23,035	534,905
1858	13,427	335,353	16,306	394,699	29,783	730,052
1859	17,431	405,456	19,960	433,490	37,391	838,946
1860	15,240	400.226	17,591	514,389	32,831	914,615

The town of Brunei, situated on the river of that name is the principal of the Malay settlements on the island, and the capital of the Sultan. It is a place of considerable magnitude, and its population is considered to number more than 20,000 persons. The British Government at the instance of Sir James Brooke formed an alliance in 1848 with the Sultan, and obtained from him the cession in perpetuity of the little island of Labuan, situated opposite to the entrance of the river Brunei.

Mr. St. John, British Consul-General in Borneo, in his report to the Foreign Office of the trade in Brunei town for the year 1857, stated that the exports, with the exception of sago flour, consist principally of jungle produce, as punk or tinder, rattans, edible bird's nests, camphor, beeswax, and gutta percha. The small quantity of pepper grown is principally exported to Labuan; this produce is, however, increasing, and the infusion of capital would rapidly extend its cultivation. Tobacco is planted rather extensively, affording sufficient supplies for this nation of smokers. Cotton is grown in small quantities in almost every district, while coffee is confined to the neighbourhood of the capital, and rice is not produced in sufficient quantities to supply the inhabitants. The following is an account of the trade to Singapore in British vessels,—the amount of the imports and exports in native vessels is not attainable:—

The British imports principally consist of cotton goods —as grey and white shirtings, coloured cottons, chintzes, &c., to the value of 122,594 dollars, together with crockery, steel, iron, and salt, with a few more expensive articles for the nobles.

The principal exports were, 38,510 cwt. of sago flour, valued at 69,546 dollars; white bird's nests, 13,918 dollars; camphor, 14,507 dollars; miscellaneous, 22,184 dollars; 6,000 tons of coals, valued at 25,000 dollars, furnished to the navy, and shipped to Hong Kong and Singapore; together with 7,360 dollars'-worth of sago in Dutch vessels, making a total export of £30,503. The above is a very large increase on the trade of the previous years, and it is to be hoped that it will be found practicable to establish the cultivation of cotton, and extend that of pepper. A tin mine has been discovered in Maluan Bay, but no steps have been taken to work it; antimony is reported in the neighbourhood of the capital. Barus camphor, from Borneo, is named after a port in Sumatra, from which formerly the supply was chiefly obtained. It is much esteemed in China, where it is said to be used for flavouring the Chinese camphor, an inferior article obtained from a different description of tree.

Without dilating unnecessarily upon the value and importance of Borneo, it is but just to declare that, with regard to its natural advantages, there is not perhaps a finer territory in the whole world. In point of situation it is almost unrivalled; its productions are rich, varied,

and most abundant; the climate is fine and salubrious, and the country possesses, in an eminent degree, all the elements requisite for the formation of a wealthy and powerful state. A recent writer on this locality has well observed, that it is very desirable for the interests and prosperity of Great Britain, and for the welfare and improvement of the inhabitants of the island and surrounding countries, that the British government should acquire, by means of negotiation and purchase, the sovereignty of this vast and valuable country. If it be suffered to continue in its present condition, its resources will not be developed for many centuries, and it will hardly be disputed that, under British settlement and colonization, this fine country will prove more advantageous to the whole world than it can possibly be under any other government.

Now these remarks are somewhat in opposition to those of Mr. Crawfurd, who alleges that "all attempts on the part of European nations to establish a permanent territorial dominion in Borneo, will, in the long run, be baffled by the insuperable obstacles of an incongenial climate, a stubborn soil, a rude and an intractable population, and the absence of all adequate financial resources. Such dominion (he adds) no doubt has been established in Java, the Philippines, and Hindustan, with fertile soils, dense and docile populations, and large financial resources; but that is no reason for imagining it could be established in a sweltering jungle, occupied either by savages, or by rude, idle, and intractable barbarians." And yet, in speaking of Sir James Brooke's labours at Sarawak, after justly characterising him as a man of great enterprise, strong will, and ample courage and ability, Mr. Crawfurd says, "The result has been a great accession of population by immigration, consisting of Malays, Dyaks, and Chinese, and a large augmentation of trade, for in 1854 its exports are stated to have amounted to a million of Spanish dollars, and its imports to 800,000. Such a result, in these rude and anarchical countries, never fails to follow from any administration which gives a fair amount of security to life and property."

The island of Labuan, in a commercial point of view, is of little significance. The population is under 1,200, and, even with the aid of a large annual parliamentary grant, it has been difficult to raise revenue sufficient to meet the expenditure. The imports have averaged about £20,000 and the exports have ranged from £22,000 down to £6,000. The coal exports have been declining. In 1856, 5,539 tons were shipped; in 1858, none were exported. Between 1850 and 1857, 35,691 tons of coal were shipped from Labuan.

Of the Sulu Archipelago we know comparatively little. The people of Sulu and the Lanuns of Mindanao, are the most daring habitual pirates of the Malayan seas. Their predatory fleets extend their cruises from one end of the Malay Archipelago to the other, but the chief theatres of their depredations are, and always have been, the Philippines. These great piratical communities send forth periodically large fleets to scour the seas, and treacherously lurk along the shores of the Archipelago, despoiling the seafaring trader of the fruits of his industry and his personal liberty, and carrying off from their very homes the wives and children of the villagers as slaves. From the creeks and rivers of Borneo and Johore, from the numerous islands between Singapore and Rhiu, and from various other parts of the Archipelago, piratical expeditions are, year after year, fitted out. No coast is so thickly peopled, and no harbour so well protected, as to be thoroughly secure from all molestation, for where open force would be useless, recourse is had to stratagem. The Dyaks of the rivers of Serebas and Sabanan, on the north-west coast, have long been a terror to the inhabitants of that part of Borneo. The mouth of the Coti River, on the east coast, is also much infested with piratical prahus, which prey at pleasure upon such small craft as may unfortunately become becalmed at the entrance of Macassar Strait. The articles of commerce furnished by the Sulu and neighbouring islands, are chiefly the produce of the fisheries, pearls and pearl oysters, tortoiseshell, trepang, and edible birds' nests.

CELEBES is the fifth island in magnitude of the Asiatic Archipelago, and has an area of about 57,250 square geographical miles. Of the metals, copper and tin are stated to be found there, but iron and gold are the only two that are abundant, and respecting which we have reliable information. The last of these is very widely disseminated over the northern part of the island, and procured by the rude washings of the natives. More of it is exported than from any other island except Borneo. The sago, cocoa, and gomuti palms are natives of the island. The culture of coffee has recently been introduced by the natives, and the cacao in the northern peninsula. The civilised inhabitants excel in the manufacture of checked cottons, distinguished for their durability, and for the permanence although not the brilliancy of their colours. The raw materials are their own, and the women are the spinners, weavers, and dyers. These cloths are largely exported to the European and other emporia of the west, and maintain their place in competition with the manufactures of Manchester and Glasgow.

In the volcanic province of Minahassa, at the extreme end of the northern peninsula, there is considerable attention paid to agriculture, Rice, maize, the ground-nut, the gomuti and sago palms, tobacco, coffee, cocoa, and plantain fibre are among the staples. Cocoa, which is exported to Manila, is produced to the extent of about 200,000 lbs. yearly, Minahassa being the only country of the Malayan Archipelago in which this rather delicate tree has been successfully cultivated. In 1854, there were one million cacao trees. The coffee is of a very fine quality, and is considered superior to the best of Java. The amount produced is about 3,200,000 lbs. It is a monopoly of the government, which requires the delivery to it of all that is produced, at a fixed price, payable in a depreciated small copper coinage. In the beginning of 1855, there were about 5,000,000 coffee trees in Minahassa, but not all in bearing. In some districts the produce per tree is as much as one to two Amsterdam pounds (2¼ to 4½ lbs. avoir.), while in others it is only ½lb. to ¾lbs. The formation of regular plantations was commenced in 1822. In 1827, the forced delivery of coffee in Menado was abolished, but the obligatory planting retained, and a duty imposed of 4 florins per picul. This system was changed in 1832 for that of a compulsory delivery of coffee at 15 florins per picul, and this was again replaced, in 1850, by the imposition of the new system of taxation, the price per picul (133⅓ lb.) being fixed at 8½ florins on delivery in the government stores, which had been in the meantime established at different places in the interior. About 20,000 piculs of rice are grown yearly, but it is small in grain, and of a poor quality. Tobacco is generally cultivated, but only for local consumption.

The cultivation of the plantain (*Musa textilis*) for its fibre, here known as koffo hemp, has been largely entered upon, not only in Menado, but in all the districts of Minahassa. It is prosecuted under the encouragement of government, but entirely for the benefit of the planters. Mr. Jansen, the official resident, an experienced and talented officer, takes great interest in the cultivation, and gives it every assistance.

In 1853 there were planted in Minahassa 24,481 koffo plants; in 1854 above 38,000; while in 1855 the planting was very largely increased. There are probably already more than one hundred thousand koffo plants, which when they are fit for manipulation will give about a thousand piculs of fibre. The most extensive planting has taken place in the Amurang division. The above particulars refer only to the koffo culture on government ground. In the Minahassa there are, however, extensive lands which belong to private proprietors, mostly Europeans or their descendants, and which are planted with cacoa and nutmeg trees, cocoa palms and koffo plants. The koffo culture already occupies a large space on some of

these properties. Mr. Jansen, in an article published in one of the scientific periodicals at Batavia, noticed the interesting and novel fact, which has been ascertained by observation, that the koffo grows freely from the seed and not solely, as was formerly thought, from cuttings. The ordinary cultivated plantation, as is well-known, can only be propagated by suckers. The koffo fibres are prepared here in a very defective manner by a primitive machine of native manufacture, which requires a great expenditure of labour in proportion to the work it performs. The want of a more perfect means of separating the fibres is already felt, and will be more and more obvious as the preparation of the koffo requires to be accomplished on a larger scale.

In 1847 the Netherlands Government made Macassar on the S.W. coast a free port. It is a place of considerable native trade, and 400 prahus are said to belong to it, which trade with almost every commercial place from Sumatra to New Guinea, and carry on the trepang fishery on the northern coast of Australia with Chinese capital.

The trade with New Guinea and the Eastern Islands (commonly called Bugis trade), and the trepang fishery, is carried on chiefly in prahus or vessels of this description, which leave Macassar and other ports of Celebes for the eastern islands during the westerly monsoon, returning with the south-east trade wind.

In the markets of Celebes it is said that not fewer than 300 different species of fish are at one time or another offered for sale. A few of them are of excellent quality, equalling, if not surpassing, in delicacy of flavour those of the European seas. The curing of ordinary fish, and the pickling of prawns, form a considerable business on all the coasts of the island, and cured fish is a considerable branch of trade between the coast and the interior.

We now pass on to JAVA.—In 1846, Dr. Bleeker estimated the population of the Dutch colonies in the East at 10,000,000. In the close of 1859, according to official returns, they comprised 578,460 square miles, and the population was nearly 17,500,000, or five times that of the home population of the kingdom. The government and administration, home and foreign, of Java and the other Dutch eastern possessions, cost £5,726,619 in 1857, and £7,161,622 in 1858. But the revenue drawn from thence was more than a quarter of a million in excess of the disbursements, the balance being applied to make up the deficit of the Dutch colonies in the West.

The number of Europeans in the Dutch colonies in the East was 26,648, of whom 20,331 were in Java. This did not comprise about 11,000 belonging to the army. The Chinese numbered about 210,000; of these 140,000, were in Java, but the great bulk of the inhabitants, 17,000,000, are natives. The number of slaves, when the proposition of emancipation was mooted, in May, 1860, was estimated at 9,000 to 11,000.

TABLE II.—SUPERFICIES OF THE NETHERLANDS POSSESSIONS IN THE INDIAN ARCHIPELAGO.

NAMES.	SQUARE GEOGRAPHICAL LEAGUES.	POPULATION.
JAVA AND SURROUNDING ISLANDS:—		
Java	2313·0	11,943,019
Madura	97·3	
Other Islands near Java	34·3	
SUMATRA AND SURROUNDING ISLANDS:—		
Government of the West Coast.		
Residency of Padang and the Interior	250·0	1,551,231
Residency of Ayer Bangies and Tappanulie	525·	
Residency of Benkulen	740·	111,028
Kingdoms and States of the interior and along the East-coast, under dependency of the Government. (The country of the Battacs, the kingdoms of Kampar, Jambi, Indragiri, the district of Korinchi, &c.*)	2979·	
The Islands along the West Coast	270·	
Districts of Lampong, S.E. coast	535·	83,793
Residency of Palembang	1340·	471,061
ISLANDS OF BANKA:—		
Residency of Banka.		
Banka	223·	49,500
Billiton	119·	12,864
Other Islands.	7·	
ARCHIPELAGO OF RIU (RHIO):—		
Residency of Rhio.		
Bintang	21·	
Linga	17·9	
Other Islands near these	53·5	29,913
Natuna, Anambas and Tambelan Islands	47·1	
BORNEO AND SURROUNDING ISLANDS:—		
Residency of Sambas.		
Kingdom of Sambas	248·1	335,340
Small Islands	0·6	
Residency of Pontianak.		
The kingdoms and provinces of Pontianak, Mampawa, Landakh, Kubu, Simpang, Sakadana, Matani, Tayan, Meliouw, Sangouw, Sekadou, Sintang, Melawi, Sepapu, Blitang, Silat, Salimban, Piassa, Jongkong, Bunat, Malor, Taman, Ketan, Punan, &c.	2452·1	
Islands of Penembungon, Karimata, &c.	11·5	
Residency of Banjermassing.		553,343
The kingdoms & provinces of Bulongan, Gunong Tebur, Tanjong, Kutei, Passir, Tanahbumbu, Tanah Laut, Duson, Bekompei, Banjermassin, Pulo Peitak, Kabajang, Kupuas, Mendawi, Sampit, Pembuang, Kottawaringen, &c.	6519·9	
Islands of Laut, Nanka, Maratua, &c.	108·0	
ISLANDS OF CELEBES AND THE MOLUCCAS:—		
Government of Makasser.		
Part of the Island of Celebes.	1674·0	
Island of Sumbawa	278·	215,277
Islands of Bauton, Saloyer, &c.	186·7	
Government of the Moluccas.		
Residency of Amboina.		
Amboina	13·3	
Part of Ceram	254·	188,728
Bouru	164·	
Other Islands	5·	

* In this number are comprised all the small States of Sumatra, except those which compose the kingdoms of Achin and Siak, of which the superficies is estimated at 924, and 732 square geographical leagues.

TABLE II.—(*Continued.*)

Residency of Thenadi.		
North part of Celebes	1433·	
Islands of Siao, Sangir, and Tulour	38·	110,749
Islands of the Bay of Gorontalo	10·	
Residency of Ternate.		
Part of Celebes	471·	
Islands Xulla and Bangay	113·	
Halmahera (Gilolo)	313·5	
Islands Obie, Batchian, Ternate, Tidore, &c.	144·7	89,076
Islands Waigiu, Battanta, Salawatti, Misole, &c.	173·	
Residency of Banda.		
Islands of Banda	1·1	
S. E. part of Ceram	55·0	
S. E. Islands Kei, Arru, Tenimber, and South West	399·0	110,179
ISLAND OF TIMOR, &c.:—		
Part of Timor	361·	
Islands Rotti, Savu, Sumba, Ende, Adenara, Solor, Lombatte, Pantare, Ombai, &c.	660·3	1,646,605
Islands of Bali, and Lombok	208·8	32,170
Total of Netherlands Possessions in the Indian Archipelago	25,872	17,528,876

In this total is not comprised the Western Part of New Guinea recognised as Dutch.

The Governor-general of Netherlands India, in 1858, proclaimed, under a general authority conferred on him by the late Colonial Minister, the opening of nineteen new ports in the Archipelago to foreign trade on the 31st May, 1859. This measure, according to our Minister at the Hague, created considerable excitement at the time, as it was apprehended that it would not be practicable to provide a staff of Custom-house officers for those ports, competent to distinguish between goods of Netherland origin and those of foreign manufacture, and thus that quantities of the latter might be introduced to the prejudice of Netherland industry. To obviate this, the present Dutch Colonial Minister instructed the Governor-general to issue a declaration—that the importation of cottons and woollens manufactured to the west of the Cape of Good Hope, would not be permitted in the ports in question. This instruction was followed by another, limiting the number of ports to be opened to foreign trade in general to six, namely, Cheribon, Passœrocan, and Tjilatjap, in Java; Natal and Priaman on the west coast of Sumatra and Sumpit, in Borneo, in which the importation of cotton and woollen goods, as above described, has been permitted since Dec. 31, 1859. The area of the islands of Java and Madura has been computed to be 51,336 square miles.

Batavia, the capital of the Dutch settlements, is a seaport, with a population of 25,000, situated on the north-west corner of Java. The public buildings, and many of the private erections are splendid. A considerable amount of trade is carried on here with all parts of the Eastern Archipelago.

Samarang, a place of considerable population, situated on the north coast about the centre of the island, ranks next in importance to Batavia, from which it is distant 361 miles. It is the entrepôt of all the commerce of the interior provinces lying around it, which embrace the richest and most populous parts. Surabaya, another large town, with a population of 82,000, is situated on the north-east coast, near the Madura Strait.

The duties and dues levied in Java, brought in 1854, £660,660. The merchandise imported in that year was to the value of £2,823,112, and the specie £535,905. The exports were merchandise value £5,688,378, and specie £382,085. The tobacco raised in the two years, 1853-54, averaged 2,500,000 lbs.

In 1858, the value of the external trade amounted to £14,747,414, or £2,258,538 more than that at Singapore, but was less than that of the whole Straits Settlements by £1,682,738. The chief articles of produce were indigo, coffee, rattans, rice, spices, sugar, tobacco, and tea. The ships which arrived in 1858 amounted altogether to 2,882, with a tonnage of 222,900 lasts, or 445,800 tons. The number of ships which left Java and Madura in 1858, was 3,344, with a tonnage of 237,776 lasts, or 475,552 tons.

The following figures show the progress of the trade of Java and Madura:—

Years.	Imports, including Specie.	Exports.
	£	£
1842	2,173,433	4,865,291
1843	1,879,282	4,916,069
1844	2,111,862	5,840,470
1845	2,257,650	5,491,264
1846	2,282,209	4,846,482
1847	1,973,264	4,953,765
1848	1,757,509	4,374,005
1849	2,008,224	5,025,526
1850	2,033,499	4,804,741
1851	2,543,533	6,032,654
1852	2,626,298	4,805,569
1853	2,665,409	5,862,980
1854	3,359,017	6,070,463

There are in Java about 320,000 horses and 2,200,000 horned cattle.

The quantity of produce raised in the island of Java in 1851 and 1855 was as follows:—

	1851.	1855.
Coffee, cwts.	1,387,572	1,516,602
Sugar, cwts.	1,524,958	1,484,726
Indigo, lbs.	954,325	803,582
Tea, lbs.	1,023,373	1,604,411
Cinnamon, lbs.	211,067	218,088
Cochineal, lbs.	172,885	169,109
Pepper, lbs.	1,022,147	653,871
Tobacco	771,856	3,270

The high price paid for india-rubber in 1853 and 1854 gave an impulse to the collection, the consequence of which has nearly been the extinction in the East of the tree from which the elastic gum is derived. The article is now worth 1s. 4d. per lb., for fair to good, and is in demand. The exports from Java have been as follows:—

	Piculs.	Value.
1851	6,872	148,416
1852	9,287	211,551
1853	15,195	455,928
1854	26,718	985,926
1855	11,621	428,424
1856	5,284	159,125
1857	6,039	234,181
1858 to Nov.	5,826	—

The exports in each of the last-named three years, it will be seen, were less than one-fourth of the exports of 1854. Years, it is said will be required to replace the trees that have been extirpated, and restore the production, which in the meantime may average 5,000 to 6,000 piculs per annum.

Our export trade with Java has been greatly on the increase of late years. In 1840, the whole value of the British goods and manufactures sent to Java and Sumatra, was but £349,521; in 1850, the exports to Java alone were

valued at £507,449, while in 1860 they had risen to £1,413,915.

The value of the Netherlands commerce with its Eastern possessions was, in 1857 and 1858, as follows, in florins:—

	1857	1858
Imports from	79,548,838	82,771,477
Exports to	33,574,888	28,950,178

BALI is the next island east of Java, and has a computed area of 1685 square miles. Its population is estimated at 700,000. The trade is more considerable than might have been expected. The exports consist of rice, oil, cotton and cotton fabrics, tobacco, and coffee. The imports are iron and English cotton cloths. The trade is chiefly with Singapore, Java, and recently with our Australian colonies.

LOMBOK has an area of 1656 square miles. The exports consist of rice, cotton, pulses, horses, and hides. Much of the rice, and of the pulses and hides are sent to China. The imports comprise salt, iron, cutlery, fire-arms, and cotton fabrics. Lombok, with Bali and Java, are the granaries of the Archipelago, being about the only countries which export the necessary article rice. Lombok sends away annually about 16,000 tons, Bali 20,000, and Java 24,000 tons.

Cotton, for which there is now an increased demand, is produced in most of the Indian islands, especially Bali and Lombok, both which islands export considerable quantities in the seed, but never for a European market. With so ready and near a market as China, we are not likely to draw supplies from the Archipelago, but if the culture were extended it might be the means of transferring some of the Indian cotton from China to Europe. The chief fault of the Eastern Archipelago cotton, is, according to Mr. Earl, the extreme tenacity with which the seed adheres to the wool. The staple, however, is excellent, as indeed is evident from the durability of the cloths made from it by the natives.

The next large island in this chain is SUMBAWA, whose computed area is 278 square leagues, or somewhat larger than Jamaica. It possesses both active and quiescent volcanos. Sandal and sappan wood are obtained in the forests, where teak is also met with, but for timber it is inaccessible. The island is remarkable for the number and beauty of its small horses, the most esteemed of all the Archipelago, and largely exported to Java.

Passing over FLORES, CHANDANA, and a number of small adjacent islands, which call for no special notice as respects trade and productions, we next reach TIMOR, where the Dutch have a settlement at Coepang, on the south-west extreme, and the Portuguese at Dilly, near the north-east end (which is computed at 2,740 square miles). The population of the Portuguese settlements here and at Solor, &c., was stated, in 1857, at 918,300 souls.

The expenditure on these islands has been three times the receipts. In the session of 1860 the Portuguese Cortes ratified a treaty with Holland, defining the boundaries of their respective possessions in Timor and the Archipelago, and ceding all rights to the islands situate to the north of Timor,—Floris, Adenara, Solor, Lomblen, Pantar, and Ombai to Holland, upon payment of 200,000 florins.

The area of Timor is about 9,808 geographical square miles. The people subject to the Dutch are estimated at 47,000. There is steam communication between Coepang and Batavia every month, and this would be an advantageous way of continuing our steam communication between Moreton Bay and Sydney. The principal exportable articles are sandal-wood and beeswax. The former, obtained in considerable quantities, is exported to China, and the latter to Java. Large proportions of very fair wheat, yielding good flour, are grown here, and onions are produced in considerable quantities, and shipped to the neighbouring countries. Copper and gold ore are found in the mountains, but the mines are not worked. Rock salt exists in great abundance at Linga, a town about 40 miles east of Dilly, a short distance from the sea-shore, and the prahus touch there for supplies. Pearls and mother-of-pearl shells are found on the south-east coast.

From the nature of the trade it is impossible to give any correct account of the value of our manufactures consumed in Timor, but even 20 years ago Mr. G. Windsor Earl, the present British Resident at Malacca, stated, "Some idea may be formed of the importance of this market when it is taken into consideration that, with the exception of rice, sugar, wines, spirits, and a few other articles imported for the supply of the European settlements, British goods alone are employed to purchase the entire produce of the island, and this must be the case in all Dutch settlements from which we are not excluded." Nothing can more materially tend to prove the value of commercial depots in this part of the world than the fact that before the establishment of our settlement at Singapore, the consumption of British manufactures in Timor was very trifling.

Timor is the most remote of the eastern islands in which textile fabrics are manufactured, the countries beyond producing no other cloths than those of bark. The texture of the cotton cloths manufactured in Timor and the adjacent islands, closely corresponds with those of the Battas of Sumatra, and the Dyaks of Borneo. The manufacture is evidently of great antiquity, and must have been introduced before that of Java, which is of Hindu origin. In some specimens of salendongs or scarfs shown at the Exhibition in 1851, from Timor, Sumatra, and other islands, the cotton and dyes were of native growth, and the silk threads introduced were obtained from China or India.

ROTTI, a rocky island, with an area of about 492 square miles, forms a dependency of the Netherland government of Coepang, in Timor. The only articles of export are horses, considered a superior breed, and the sugar made from the lontar-palm (*Borassus flabelliformis*).

The MOLUCCAS PROPER are the native country of the clove, and consist of five islets, lying in a chain running north and south on the western side of the large island of Gilolo or Halmahera. They are Ternate, Tidor, Mortier, Makian, and Bachian. With the exception of the last-named, they are mere volcanic cones springing from the sea. Three centuries ago, the yearly produce of cloves was 2,500,000 to 3,500,000 lbs. As a singular instance of the rude state of remote commerce, it may be mentioned that, before the discovery of the passage by the Cape of Good Hope, a pound of cloves cost 30s.; now it can be had for 30 half-pence. The culture of the clove has now been transferred to Amboyna and Sumatra and the islands in the Straits of Malacca.

Of BOURO, a comparatively large island, little need be said. There is a Dutch establishment on the eastern side, and in 1854 the Netherlands government declared Kayeli a free port. Nearly the whole island is one primeval forest, containing many useful woods, if there were any use to put them to. The only peculiar exportable product of the forest is the Cajeput oil derived from distillation of the leaves of a myrtaceous tree, the *Melaleuca cajeputa*.

CERAM is the largest island of the Malay peninsula, next to Celebes, having a computed area of 4,945 geographical square miles. Like other eastern islands, the forest is here the principal feature.

Lingoa wood from Ceram, the Amboyna wood of commerce, is very durable and capable of a high polish. It was imported in considerable quantities into this country during the period when the Moluccas were British possessions. This wood is abundant at Ceram, New Guinea, and throughout the Molucca seas. It can be obtained in any quantity if the precaution be taken of ordering it during the previous trading season. The Kayu Buka so much esteemed as a fancy wood, is the knarled excrescence of this tree. It is brought to Singapore by the eastern traders from Ceram, Arru, and New Guinea, and is sold by weight. Large circular slabs of the Lingoa wood are obtained by taking advantage of the

spurs which project from the base of the trunk, as the tree itself has not sufficient diameter to furnish very wide slabs. They are occasionally met with as large as 9 feet in diameter, but the usual size is from 4 to 6 feet. A cluster of Islands called Ceramlaut, off the south-east end, are much frequented by the Bugis traders, who obtain rice, and convey to the Western emporia seed-pearls, scented woods, nutmegs, birds of paradise, and a considerable quantity of sulphur.

BANDA owes its chief and almost sole importance to the nutmegs produced there. On Lonthoir, or Great Banda, there were, in 1855, 25 plantations; on the island of Neira 3, and on Ay 6. The produce of the Banda trees has varied very much, owing partly to natural and partly to artificial causes. In the earlier part of last century it was greater than it has been since; the nearest approach to the old figures having been attained in 1847, when the crop amounted to 755,252 lbs. of nuts, and 105,051 lbs. of mace. The average amount produced in the last fifteen years has been about 579,000 lbs. of nutmegs, and 137,000 lbs. of mace.

AMBOYNA owes its importance entirely to the clove plantations; and, being the capital of the Moluccas, the Governor resides here. The people of the villages are obliged each to maintain a certain number of clove trees, and the chiefs are responsible for the trees being kept in order. The produce is sold to the Government at a price so small that, were not forced labour adopted, the natives would abandon the culture. The people live entirely on the bread made from the sago palm.

We now stretch northerly to the PHILIPPINE Archipelago. According to Spanish writers, these islands amount to 408, exclusive of mere rocks and uninhabited islets. Two are pre-eminently large, Luzon, which is by more than one-half, and Mindanao by one-fifth larger than Ireland. Luzon is superior to all the rest put together, and for extent, fertility, and other natural advantages, is probably the finest in the tropical world. The entire Archipelago contains an area of about 200,000 square geographical miles.

The soil of the Philippines is exceedingly rich, and the commercial products of plantain-hemp, tobacco, sugar, indigo, coffee, sapan-wood, rice, and cacoa, are very extensively cultivated in some of the provinces, and susceptible of being so distributed among all the others.

Through this group is spread a population of from 3,500,000 to 4,000,000 of inhabitants who are Christianized, and with the exception of a few mountain and petty tribes and the Mahometans in Mindanao, live in peaceful subordination to the official agencies of the Government.

In the Island of Panay, which is below the 12th degree of latitude, and generally described by the name of its chief province Iloilo, the population is 559,861. The adjacent islands, Leyte and Samar, contain unitedly, nearly 300,000, and in Luzon the population is little short of 2,000,000.

From Pangasninan in the north is drawn a principal part of the sugar sent to England, and to Europe; and from thence, and from Ilocas, the indigo which is exported; in Zebu, Iloilo, and the southern islands, is produced the sugar which chiefly supplies Australia; besides hemp, buffalo hides, and horns, tortoise-shell, bees-wax and sandal wood, for the markets of Europe and the United States; and from the rich provinces which crescent Manila, the same productions are sent for export through the capital, while, independent of foreign trade, the northern division, as the granary of the Philippines, and of China in its seasons of dearth, and Pangasninan as the chief ship-building province of the Philippines; and Iloilo, and the south, as manufacturing districts, of webs of much value, and articles of extensive native consumption, have resources of local trade which enrich and animate their industry.

By a notice from the Foreign Office at Madrid, dated 2nd July, 1860, the only ports open for trade hire are Manila, Sual, Iloilo and Zamboangan. No direct traffic under a foreign flag is permitted with Jolo and adjacent isles, which, in conformity with the capitulation of 30th April, 1851, form part and parcel of the Philippine Archipelago.

The staple product of Philippine agriculture is rice. Next to it may be ranked maize, of which two crops are yearly produced, the variety usually in cultivation coming to maturity in nine weeks. Then follow pulses, the abaca, banana, cotton, sesame, sugar cane, coffee, and cacao; with the coco, areca, and gomuti palms, and most of the fruits of the Malay Archipelago.

No fewer than 218 forest trees, chiefly of the more northern provinces, have been subjected to experiments in the arsenal of Manila, and the relative strength, tenacity, and specific gravity of the timber ascertained for economic uses. For ship-building, the following six are most in use, the Molave (*Vitex geniculata* or *V. pubescens*) the Banaba, the Jacal, the Dungon (a *Sterculia*), the Mangachapiu (*Vatiera mangachapui*), and the Quitaquita. Of the timber of these, large ships have been built, stated to have lasted forty years, which would place them on a level with teak or oak, a fact that could not be asserted of any of the woods of the islands of the Malay Archipelago. Teak is found in the island of Mindanao, at the distance of 1,300 geographical miles from Java and Sumbawa, the only other islands of the Archipelago that yield it. It grows, however, on the parts of Mindanao under native occupation, and is, therefore, not available for European uses.

The metals ascertained to exist in the Philippines are gold, found in most of the larger islands, but most abundant in Luzon and Mindanao; iron, chiefly in the same islands, with copper, lead, and mercury in Luzon. Sulphur is abundant in most of the islands, but especially in Leyte, Mindanao, and the province of Albay, in Luzon. Coal, a lignite, has been found and partially worked in the islet of Rapu-rapu, on the eastern coast of Luzon, at the entrance of the great bay of Albay, and the two small islands at the southern extremity of Mindanao, called Serangani, are stated to be nothing but coal-beds, not improbably part of the same Borneon field which crops out at Labuan, and is now worked by an English company.

The article termed in commerce Manila hemp, which is, however, the fibres of a plantain stem, is now so important an article of commerce, and affords so excellent an example for following out in other quarters, that I shall dwell somewhat upon the manufacture. It is by no means a new industry. The celebrated circumnavigator, Dampier, notices the process, more than a century ago, as follows:— "They take the body of the tree, clear it of its outward bark and leaves, cut it into four quarters, which, put into the sun, the moisture exhales; they then take hold of the threads at the end, and draw them out; they are as big as brown thread: of this they make cloth in Mindanao, called *saggen*, which is stubborn when new, wears out soon, and when wet is slimy." The natives of the Philippine islands give the name *abaca* to the vegetable fibres of an indigenous species of the plantain, *Musa textilis*, of which they make their cordage; and of which they have considerable manufactories. In 1831, the whole export of Manila hemp (so called) from the Philippines did not amount to more than 346 tons; in 1837, it had reached 3,585 tons; and during 1856, no less than 22,000 tons left Manila for the United States and Europe. This plantain was formerly believed to be found only on Mindanao, but this is not the case, for it is cultivated on the south part of Luzon, and all the islands south of it. It is not found, however, growing in the Philippines north of lat. 14° N. It grows on high ground, in rich soil, and is propagated by seeds. The plant attains the height of fifteen or twenty feet. The usual mode of preparing the hemp is to cut off the stem near the ground, before the time, or just when the fruit is ripe. The stem is then eight or ten feet long below the leaves, where it is again cut. The outer coating of the herbaceous stem is then stripped off, until the fibres or cellular parts are seen, when it under-

goes the process of rotting, and after being well dried in houses and sheds, is prepared for market by assorting it, a task which is performed by the women and children. That which is intended for cloth is soaked for an hour or two in weak lime-water, prepared from sea-shells, again dried, and put up in bundles. From all the districts in which it grows it is sent to Manila, which is the only port whence it can legally be exported. It arrives in large bundles, and is packed there, by means of a screw-press, in compact bales for shipping, secured by rattan, each weighing two piculs (or 266 lbs.) The best description ought to be white, dry, and of a long and fine fibre. This is known at Manila by the name of *lupis*, the second quality they call *bandala*.

The exportation has much increased within the last few years, in consequence of the demand for it in the United States and Europe; and the chief part of the crop is now monopolised by the two American houses of Sturges and Co. and T. N. Peak and Co., of Manila, who buy all of good quality that comes to market. This is divided between the two houses, and the price they pay is from four to five dollars the picul.

In May, 1842, an American, named O'Keating, established himself at the village of Nactagan, in the environs of Manila, and commenced the manufacture of cables and cordage from the Abaca, upon the most improved system in use in England and America. After having passed several years at Manila, and collected all the information necessary for the execution of his project, Mr. O'Keating returned to the United States in order to procure the necessary apparatus and machinery. He took with him from Boston a high pressure steam-engine of 30 horse-power, with the requisites for dressing the hemp and converting it into rope. His factory is situated on the banks of the Passia. The first floor is occupied with the dressing machines, three of which are cylinders of wood, covered with points of iron of about two inches in length, distant from each other about 1½ inches. These first open the fibre of the hemp, which then passes to another machine, under a cylinder of much larger diameter, of which the points (cards) are much smaller, and placed together. By these the fibres of the hemp are separated into a much finer thread, and divested of the woody or useless particles. After this preparation the hemp passes between two iron cylinders, which compresses it very strongly. From thence it is conducted to a smaller machine, which gives the first twist, and winds it on a bobbin of about six inches diameter. The dimensions of the cord are increased or diminished by means of an iron screw, which adjusts the diameter to the hole (through which the fibres pass) to the required size.

The ropery is a building 800 feet in length, built entirely of American timber, with a shed at each extremity. In the one farthest from the house is the rack upon which the bobbins are ranged. Eight or ten bobbins of hemp suffice to make a cable of a large size. Twelve or fifteen may be made at a time. The strings of the bobbins pass through round holes, pierced in a plate of brass, having an octagonal form fixed on another rack (*ratelier*) perpendicular to the line of the ropery. The mass of strings or strands are united together by an iron hook, which is fixed on a carriage with a double catch, drawn by the steam-engine on a railway.

The article produced is very superior to that made by hand, and in strength and durability there is no comparison between these two articles. By this machinery the hemp is better cleaned of its woody and useless parts, which, whilst it improves the cordage, considerably increases the cost, from the greater loss of material in this process. The steam cordage sells at 8 dollars per picul, while the ordinary kind fetches only 6½. About 16 piculs can be produced daily. The cost of the raw material is four dollars per picul. Nearly 40 natives are employed, whose average daily pay is about 14d. The fuel used for the engine is wood, which costs about 1¼ dollar the talaxan (about 73 cubic feet). These comparative prices refer to a few years ago, and may have undergone change since then.

The highest degree of skill is displayed in the manufacture of textile fabrics in the Philippines, the raw materials being cotton, the fibres of the abaca (*Musa textilis*), banana, and pine-apple leaf, all of them domestic products, with silk imported from China. The manufacturers are women, and, as in all other Asiatic countries, the manufactures are entirely domestic. They extend all over the islands, but are more especially determined towards the provinces of which the raw materials are the staple products. Thus, in Ilocos, which is remarkable for the growth and export of cotton, there are supposed to be no fewer than 20,000 looms. Camarines and Albay, in Luzon, and Iloilo, in Panay, are the chief centres of production of the abaca, or Manila hemp, and there, also, are the principal manufacturers of it. Manufactories of cotton and abaca, as also of the pina, or fibre of the leaf of the pine-apple, are carried on in the metropolitan province of Tondo. From the extraordinary facility with which the pine-apple is grown in the vicinity of the equator, it seems almost certain that, by the application of European skill to the process of separating the fibre from the pulpy matter of the leaf, a valuable raw material composed of it might be obtained for the manufactories of Europe. The cloth made from the pine apple fibre, by the industry of the Philippines, is well known to be of great strength, durability, and beauty. The production of fruit and leaves in no manner, it should be remembered, interfere with each other, the leaves being fittest for fibre after the fruit has ripened, the reverse of what is the case with the poppy, which cannot produce both opium and oil; the coco palm, which will not yield both sap and fruit, and the plantain, which must be cut down for its fibre. From the pine-apple fibre in Manila are produced fabrics which are as great curiosities as the muslins of Dacca or the shawls of Cashmere. A single dress of pina, suitably embroidered, has sometimes been sold for the enormous sum of £325.

The art of dyeing is but very imperfectly understood. The materials are vegetable products, such as the sibucao, or sappan wood, and the colours produced are neither bright nor permanent. The art of calico printing is unknown, as it is, indeed, to all the Asiatics except the Hindoos. The extent to which textile manufactures are carried on may be judged by the fact that with but a small exception for foreign fabrics, nearly 5 millions of people are clothed with them, and that there is even some considerable exportation.

The art of mat-making is carried on to much perfection by the islanders, the raw material being sago, palm leaf, and rattan. Sago mat bags for packing, to the number of 156,000, were shipped to Manila from Capiz, in 1856. Sagaran and Guimaras coarse Manila hemp-matting, are largely used at the Government factories in Manila, for packing the leaf tobacco forwarded to Spain.

At several places in Luzon, in Cebue, &c., the natives make a species of cloth from the plantain tree, known by the names of "Medrinaque" and "Guiara" cloths. The former description is in the greatest consumption, being stouter and more valuable than the other sort, and is mostly all bought up by the natives themselves, although a small portion of it is also exported. The bulk of all the Medrinaque exported goes to the United States, to the extent of about 30,000 pieces annually, and sometimes as much as double that quantity is sent. In 1850 a large quantity was sent to Europe, a novel feature of the trade in the article.

In the shape of hats, cigar cases, and the like, there is even a considerable exportation, besides a large domestic consumption of articles of this description. The highest degree of mechanical skill is probably exhibited in the manufacture of gold trinkets, consisting of works in filagree and necklaces; some of the last, under the name of "bejuguillos," are even highly appreciated in foreign countries. The goldsmiths, equally with the weavers, are women. The art of manufacturing a coarse, un-

glazed domestic pottery, has been immemorially practised, but all the earthenware of any value is brought from China. The manufacture of malleable iron is very imperfectly understood, and the iron of inferior quality, and hence the chief consumption is furnished from Europe.

PANAY is the largest of the Philippine islands after Mindanao, and the most fertile and densely peopled of that Archipelago. In 1850 it contained a population of 566,957, equal to 145 inhabitants to the square mile. The soil well irrigated by abundant mountain streams, is eminently fertile, its staple products being rice, sugar-cane, cotton, coffee, tobacco, pepper, and cacoa. Its forests yield ebony and sapan wood, and its shores and rivers abound in fish, including the mother-of-pearl oysters, the tripang and tortoise. The island is divided into three provinces called Capiz, Iloilo, and Antique. Capiz is the most productive in rice of all the Philippine provinces, the seed, according to some Spanish writers, returning from 150 to 200.

Although the cultivation of sugar in Panay as an article of export is comparatively recent, in 1856, 12,000 piculs went forward from Iloilo to Manila, of which about 3,000 were brought over from the Isle of Negros. In 1857, so great was the stimulus given by enhanced prices, that about 25,000 piculs, or nearly 1,600 tons were shipped, and since then there has been a further large increase, owing to the rapid extension of cane planting. The island of Negros produces about 1,000 tons, and the contiguous island of Zebu 6,000 tons. The very defective nature of the process employed by the native and "mestizo" planters, does not allow of the production in Iloilo of a superior class of sugar, and all that leaves for Manila may be described as "ordinary brown unclayed," but the grain is usually very good, and on undergoing the ulterior process in England and Australia, it yields a fine strong sugar, and has been much approved of for boiling purposes at the Glasgow refineries.

Were a better system of crushing and boiling introduced, sugar of an excellent quality might be produced, and it is greatly to be desired that a few Europeans, with sufficient capital and experience, would form estates in the neighbourhood. At present there is not a single iron sugar-mill in the island. The unclayed sugars of the Philippines, in ordinary times, even with the present defective, and consequently expensive, mode of manufacture, are held to be the cheapest in the world.

Sappan wood is exported in considerable quantity from the province of Iloilo. It is chiefly produced in the vicinity of the southern coasting towns, Giumbal, Nuagao, and San Joaquin (the farthest within 20 miles of Iloilo), from whence the greater part is brought round by sea, for shipment to Manila. In 1856, about 2,100 tons were shipped to Manila, and 49 tons from Antique. The high prices lately obtainable at Manila led to the formation of new plantations, which will further increase the exportable amount. The large quantity of this dyewood shipped (mostly to Europe and the United States) from Manila, is generally taken at comparatively low freight, in lieu of dunnage, but a considerable portion both of straightwood and roots (the latter of which are used in China and at Calcutta), is sent on yearly to Singapore and Amoy, and forms the bulk of cargoes of such vessels as load at Manila for the former port. The quality of the Iloilo sappanwood would be much better were the natives to abstain from the practice of cutting down a large proportion before the trees are sufficiently grown. When allowed to attain its proper development, it is said to be equal or superior to that of Misamis and Bolinar, at present the best qualities brought to the Manila market. As both settlers and natives endeavour to deliver the wood as soon as practicable after it is cut, the loss in weight on the short voyage to Manila is said to be sometimes as much as 12 or 14 per cent.

The production of tobacco, throughout the world, is now enormous, the consumption in Europe alone being about 460,000,000 lbs. The quantity produced in Java and the Philippines is on an average 4,000,000 lbs.

The tobacco shipped from Iloilo is classed into five qualities, the rates given by the factory for which are respectively 6¾ dollars, 5¼ dollars, 3 dollars, and 2 dollars, 87½ cents, per quintal, respectively. The seedlings are planted out in January, and the greater part of the crop comes forward in May and June. The soil of the major part of the Bisaya Islands is favourable to the growth of tobacco. The Island of Negros formerly produced about 8,000 quintals of very good quality, which the Iloilo traders, through their agents, were in the habit of purchasing from the independent tribes inhabiting the interior. Zebu produces about 3,000 to 5,000 quintals for export, of rather inferior quality. At Leyte, particularly in the district of Mosain, tobacco of very excellent quality and colour is grown, but it does not pay to produce in large quantities for sale to the factories at Manila, and is consequently used almost exclusively in the Bisayas, where it is much appreciated. Samar also grows tobacco for local consumption. The manufacture of cigars is allowed throughout the Bisayas, but not for sale at Manila or elsewhere. For the present, the export of tobacco from Panay and the other islands possesses little direct interest for British and other foreign merchants, for whom the transactions with the Government, as at present conducted, are not of a desirable or suitable nature. The British Vice-Consul considers that if the existing monopoly of tobacco were abolished (substituted by a system of farming out lands, a direct tax on the quantity under cultivation, or an export duty), and both the free manufacture for, and direct shipment to, foreign markets allowed, the export from Panay would immediately become of great importance to the foreign trade. The soil of the greater portion of the island being well adapted for the cultivation of the plant, the export, under the stimulus of much higher prices, and the consequent employment of more and better directed capital, would be capable of great expansion, particularly if, as would in all probability be the case, the culture were undertaken by Europeans, and the present system, of small patches cultivated by natives, gave place to estates on a large scale, as in Cuba. The subject of the suppression of the existing monopoly is a most important one for the Philippines, and especially so for Panay, where the cultivation of the tobacco plant has already reached a considerable degree of development.

At Pangasinan, according to the report of our Vice-Consul at Sual, the articles of trade are rice, 600,000 to 700,000 cavans annually, which ranges from 1½ dollars to 2½ dollars per cavan, according to the season; paddy, 4 to 12 sheaves for a dollar; sugar, 100,000 to 150,000 pilones, fluctuating between 1 dollar and 3¼ dollars per pilone or pot, of more than 75 lbs. Indigo, 200 quintals, 34 to 52 dollars; mastic, 1¼ to 1½ dollars per quintal, according to quality; sappan wood, 1 to 2½ dollars per pesado of 7 arrobas (175 lbs.). Rattans entire, from 3 to 4½ dollars per thousand, cut in parcels 37½ cents. per thousand; coco-nuts, 1 to 1¾ dollars per hundred, straw hats according to quality 37½ dollars to 75 dollars per hundred; cow and buffalo hides, and pigs are also articles of trade. Large numbers of bullocks are also sent by land to Manila from Sual and the district of Bolinao at a price of 6 to 8 dollars, small and large together.

The system of collecting merchandise and produce through brokers (*personeros*), in all the Philippine islands, is subject to many grave inconveniences. Advances, always in silver, are made to them to purchase. Between the exporting merchant and the native grower there are so many intermediate hands that neither one nor the other can obtain the profits he is entitled to. Collecting merchandise by commission has, however, become there an easy and commodious occupation, in which thousands of men are engaged, who by their number, and the requisite remunerations to them for their intervention, seriously affect commercial values and facilities in every respect. The most experienced persons in the country, while they are sensible of the evils of this system, consider it necessary and irremediable, owing to the distances from one

place to another, the habits of the natives, and the qualities of the productions themselves.

Considering the great advantages which would accrue from the establishment of lines of small merchant steamers between the islands, the fact that the local Government has lately given orders to commence working the extensive coal districts existing at Zebu is not without importance. The subject of steam communication for the Archipelago is attracting attention at Manila, and it is not improbable that in a few years the islands will be connected in this way in a manner which will greatly tend to their advantage.

NEW GUINEA is conjectured to have an area of 200,000 square miles. It is only separated from North Australia by a sea of 80 miles broad. Our knowledge of this island is meagre in the extreme, but judging from all that has been ascertained regarding the neighbouring islands of Borneo and Celebes, and from the little that has been reported of New Guinea, it seems probable that the latter bears in its natural features and productions a general resemblance to Borneo. As far as it has been seen, the whole island appears to be one uniform and luxuriant forest, many of the trees of which run up to the height of 150 and 180 feet. The economical use of the timber of these large trees has not been determined. Three commercial plants seem to be found there, the nutmeg, the Massoy, the bark of which is in repute, and the pulasari (*Alyxia stellata*). If the local timber should prove to be of good quality, it is probable that it may come to be in demand in our Australian colonies, when these attain a more dense population.

The sovereignty of this great island was formally claimed for the British Crown in the year 1793, by Captains Bampton and Alt, in the ships *Hormugeer* and *Chesterfield*. The Dutch attempted to form a settlement on its southern coast in 1828, in the bay of Oetenata, which ended in a failure. It required seven weeks time to clear a spot for a small redoubt, and when this was effected the insalubrity of the place was at once developed, though its occupation continued for several years, until necessity compelled its abandonment. Proposals have been made, from time to time, in this country to colonise New Guinea, and to introduce the culture of cotton there, and however glowing the prospects held out may seem on paper, they are based upon insufficient knowledge and chimerical views. The future discovery of mines of silver, gold, copper, or tin, might tempt the settlement of Chinese, but not of Europeans in tropical and forest-clad New Guinea.

The produce of the Arru islands, to the south-west of New Guinea, a group extending about 100 miles from north to south, consists chiefly of pearls, mother-of-pearl shells, tortoise shell, birds of paradise, and trepang, ebony, and kayubuku wood. The Bugis prahus import large quanties of British calicos, iron, hardware, muskets, gunpowder, &c., from Singapore. To obtain these, Dobbe, the town on the island of Warud, is visited by natives of Ceram, Buru, New Guinea, and all the adjacent islands, it being the only spot in that part of the world where British manufactures can be procured. Of the timber of the Arru Islands there are several varieties highly spoken of for durability, and the ease with which it is worked. Although of immense size, the trees are almost invariably sound, and as they can be felled within a few yards of the beach, it is not impossible that timber may at some future time form a valuable article of export.

The Ki group, sixty miles distant from Arru, consists of two large islands, with a population of about 10,000. The commerce here is inconsiderable, when compared with that of the Arrus. But prahus from Celebes, Buton, and Banda come here to obtain tortoiseshell, Indian corn, and cocoa nut oil. The last is the staple produce of the group, and is of superior quality. A large portion of the prahus navigating these seas are built here. The small boats especially are highly prized for their durability and swiftness, and it is singular that these people have hit upon a model closely resembling that adopted for fast-sailing vessels in England.

I quite agree in the observations thrown out on a late occasion here by Mr. Crawfurd, that state policy demands the establishment of a British settlement on the north coast of Australia, and a naval station there which might, as from a centre, radiate to India, China, the Oceanic Islands, and the British Possessions in Australia, at once to remove the lawless and predatory hordes infesting the islands of the Archipelago, and to command and protect the commerce of the Straits, and of the existing Australian Colonies.

From the opinions I have heard of the locality, from my brother-in-law, the late Capt. Timpson, R.N., who was for some time officially resident there, I do not think, however, Port Essington should be the spot—for that Government settlement turned out a failure. Cape York, or some part of the Gulf of Carpentaria, would form probably a more suitable locality, and our knowledge of the surrounding country, and of the interior, has, of late years, been greatly extended.

The survey we have thus taken of this important field of commerce, superficial as it has necessarily been, will serve to convey an idea of its present extent and future prospects. The extension of trade, of British influence, and of steam communication, will do much to promote civilisation, and to suppress piracy.

PRINCIPAL SPECIMENS EXHIBITED.

GUMS, RESINS, &c.

Singapore Dammar	Singapore.
Black Dammar	Malacca.
Dammar Batu (Shorea robusta)	Malacca.
Dammar	Malacca.
White Dammar (Chloroxylon dupada)	West Coast of Sumatra.
Resin of ,, (Chloroxylon dupada)	Sumatra.
Gaju gum (Anacardium occidentale)	Celebes.
Gutta kandis (kind of gamboge)	Borneo.
Getah kawhe (ditto)	Java.
Manilla mastic	Philippines.
Heraduccan (A kind of Dragon's blood)	Sumatra.
Dragon's blood	
Gutta percha or Taban	Borneo, &c.
Caoutchouc	Borneo & Java.
Gamboge	Sarawak.
Benzoin (Styrax benzoin)	Sumatra.
Wood oil	Singapore.
Dammar oil (Dammara orientalis)	
Camphor oil (Dryobalanops camphora)	Borneo and Sumatra.
Camphor (Dryobalanops camphora)	Ditto.
Cajeput oil (Melaleuca cajeputi)	Bouro.
Borneo dammar	Borneo.

OILS AND OIL SEEDS.

Katjang tanah (Arachis hypogœa)	E. Archipelago.
Borneo tallow nuts (Dipterocarpus sp.)	Borneo.
Borneo vegetable tallow ,,	Borneo.
Nutmeg butter (Myristica moschata)	Moluccas.
Candle nuts (Aleurites moluccensis)	

DYE STUFFS, &c.

Sappan wood (Cæsalpinia sappan)	Philippines.
Sappan root (Cæsalpinia sappan)	
Yellow dye wood (Cæsalpinia pulicata)	
Yellow dye wood (Cæsalpinia sp.)	
Kayu Kudrang	Malacca.
Bunchong Balu	Celebes.
Lakah wood	Archipelago.
Lopisip bark	Celebes.
Mangrove bark (Rhizophora mangle)	Singapore.
Samak bark	Singapore.
Sogah bark	Singapore.
Mungkudu (Morinda umbellata)	Java & Celebes.
Turmeric (Curcuma longa)	Java.

Olen or Mishmee (Coptis sp.?)	Batavia.
Java indigo (Indigofera sp.)	Java.
Manila indigo (Indigofera sp.)	Manila.
Gambier (Uncaria gambir)	Singapore.
Catechu (Acacia catechu)	Singapore.

SPICES, CONDIMENTS, &c.

Sumatra black pepper (Piper nigrum)	Sumatra.
Java black pepper (Piper nigrum)	Java.
Singapore white and black pepper (Piper nigrum)	Singapore.
Black pepper (Piper nigrum)	Batavia.
Long pepper (Chavica officinarum)	Surrabaya.
Nutmegs (Myristica moschata)	Moluccas.
Wild nutmegs Myristica sp.) 2 varieties	Batavia.
Wild nutmegs (Myristica sp.)	Malacca.
Mace (Myristica sp.)	Malacca.
Cassia buds (Cinnamomum cassia)	
Cassia vera (Cinnamomum cassia)	Batavia.
Clove stalks (Caryophyllum aromaticum)	
Cloves (Caryophyllum aromaticum)	Amboyna.
Clove bark	Borneo.

FOOD PRODUCTS.

Ejin (a kind of grain)	Malacca.
Rice (Oryza sativa)	Java.
Ketane rice (Oryza sativa)	Malacca.
Sago pith	
Sago cakes	Ceram.
Brown sago	Borneo.
Granulated sago	Borneo.
Pearl sago	Borneo.
Sago flour	Borneo.
Fine Borneo sago	Borneo.
Arrow root	Singapore.
Tapioca	Singapore.
Tapioca sago	Singapore.
Kedaoong (a kind of pulse)	Java.
Kakara (ditto)	Java.
Kojang Botor (ditto)	Java.
Java Imperial tea (Thea bohea, &c.)	Java.
Java Young Hyson (Thea bohea)	Java.
Java coffee (Coffea arabica)	Java.
Timor coffee (Coffea arabica)	Timor Island.
Singapore Coffee (Coffea arabica)	Singapore.
Cane sugar (Saccharum officinarum)	Java.
Palm sugar (Arenga saccharifera)	Java.
Nipa sugar (Nipa fruticans)	
Toddy or arrack	
Agaragar (Sphaeroccus spinosus) 3 var.	Malacca.
Edible Alga (Laminaria saccharina)	
Ditto (Gelidium corneum)	
Ditto (Plocaria candida)	
Blendju (Fried with oil)	Java.
Kanari (Canarium commune)	Java.
Tamarinds (Tamarindus Indica)	Malacca.

FIBRES, &c.

Cotton (Gossypium sp.) 2 varieties	Sumatra.
Cotton (Gossypium sp.)	Celebes, Java, and Borneo.
Bark Cloth	Borneo.
Ditto (Broussonetia papyrifera)	New Guinea.
Pine apple fibre (Ananassa sativa)	Singapore.
Rhea fibre (Boehmeria nivea)	Java.
Pina muslin (Bromelia pigna)	Philippines.
Plantain stem fibre (Musa paradisiaca)	Mindanao.
Manila hemp (Musa textilis)	Philippines.
Ejou fibre (Arenga saccharifera)	
Fibre of Bœhmeria candicans	Java.
Agava fibre	
Malacca cane (Calamus scipionum)	
Rattans (Calamus sp.)	Banjermassen.
Bamboo (Bambusa arundinacea)	

WOODS.

Kayu garu (or Lign aloes)	Borneo.
Kayu buka	Cesam.
Sandal wood	Timor.
Teak	
Ebony	Borneo.

DRUGS, &c.

Cubebs (Piper cubeba)	Java.
Pakoe kidang (Balantium chrysotrichum)	Java.
Betel nuts (Areca catechu)	Sumatra.
Ignatius Beans (Ignatia amara)	Philippines.
Nux vomica (Strychnos nux vomica)	Ind. Archipelago
Tjinkok	Java.
Tjeko	Java.
Djamoer bomoo (a fungus)	Java.
Tobacco (Nicotiana rustica)	Java & Manila.

ANIMAL PRODUCTS.

Trepang (Holothuria sp.)	Three varieties.
Dried cuttle fish	
Dried molluscs	
Edible birds' nests	Java.
Mother-of-pearl shells	Manila.
Pearls	Sulu.
Tortoise shell	Manila.
Birds of Paradise	New Guinea.
Beeswax	Borneo.

MINERAL PRODUCTS.

Antimony (Sulphuret)	Borneo.
,, (Oxide)	Borneo.
Coals	Borneo.
Sulphur	Labuan.
Iron	Borneo.
Tin	Borneo, &c.
Quicksilver	Borneo.

CLOTHING, IMPLEMENTS, &c.

Sumpitan, with war-spear, as used by the Kyans.
Umbrella Shield of Kyan Chief, ornamented with human hair tufts.
Female's large hat, worn to keep off the sun.
Man's cap.
Models of Pirate Vessel and Native Boats.

Among those to whom I acknowledge myself indebted are, to the Royal Geographical Society, and Mr. E. Stanford, for maps and diagrams; to the Borneo Company, for specimens of Borneo produce; to Dr. Forbes Watson, of the East India Museum, for various samples of Straits and Eastern produce; to Dr. Macgowan, for Dyak weapons and articles of dress; to Messrs. Noble, for fibres; and to M. C. Cooke, Esq., for various interesting illustrations. These, with the numerous specimens from my own private collection, have enabled me to present to the meeting a large and varied display of almost all the principal productions of the Archipelago.

DISCUSSION.

The CHAIRMAN would now invite discussion upon Mr. Simmonds' paper—in his (the Chairman's) opinion a very able one, mastering so many details, and exhibiting an amount of information enough to make those who, like himself, thought they were pretty well acquainted with the subject, quite jealous. There were many gentlemen present who were competent to address the meeting upon this subject—some who were probably better acquainted with the subject than he was, although he had bestowed nearly fifty years' attention upon it.

Dr. MACGOWAN remarked that Mr. Simmonds had certainly not overrated the productive capacity of this extensive range of islands. There had been a very remarkable change in the commercial intercourse between these islands and China since the Chairman was in Singapore as its governor, particularly in this respect, that the en-

tire trade was formerly carried on in those huge junks with which the Chairman was familiar in his earlier days, but these were now to a great extent replaced by square-rigged vessels, owned by Chinese merchants, manned by Malay crews, and commanded for the most part by English officers. But for this Amoy and Ningpo would be but insignificant places for trade. He should be glad to have from the Chairman some information with regard to the disease to which the spice trees appeared to be subject, when the attempt had been made to introduce them into fresh localities. It had been said that they did not long survive removal from their native districts. As President of the Ethnological Society, probably Mr. Crawfurd could be able to give them some information relative to the Malay population—whether they were melting away before the Chinese population, as the American Indians had done before the white races?

The Hon. WILLIAM NAPIER could bear testimony to what Dr. MacGowan had just stated with respect to the different character of the vessels now engaged in the trade between China and Singapore, although that gentleman was in error in supposing that the junks had entirely disappeared. That class of vessel was still largely employed at Macao, Amoy, and other ports, in carrying enormous numbers of Chinese emigrants and the chow-chow cargoes, as they were called, to Singapore. At the same time, no doubt the most important portion of the trade was carried on in vessels commanded by British officers, and owned for the most part by resident native merchants. But there was one observation in the paper which particularly struck him, and which had chiefly induced him to rise, viz., that which referred to piracy in the Eastern Archipelago. It was stated that fleets of piratical proahs were fitted out annually from Johore. He should be sorry to see a misapprehension of that kind go forth to the public with reference to a sovereign who was an intimate ally of the British Crown, so much so that his excise farms were sold every year in conjunction with those of the British Government. The sovereign of Johore was, he believed, particularly well known to their distinguished chairman. His father was one of the princes with whom Mr. Crawfurd negociated the treaty for the final cession of Singapore to the British Government, and he was succeeded by his son in the year 1856, now the sovereign prince of Johore. It would be a pity that such a statement as that piratical fleets were fitted out from that state should go forth to the world, as nothing could be farther from the fact. He might add that the sovereign of Johore had been presented with a sword by the Governor-General of India for his aid in the suppression of piracy. The fact was that, at the present moment, the hordes of pirates infesting the Archipelago were not Malays, but principally Chinese.

Mr. MILES rose with the intention of asking for information rather than in the hope of communicating anything of interest upon this subject. He had been much interested by a statement he had seen relative to the course which it was alleged the Dutch merchants had pursued with reference to the products of some of the Spice Islands. He had seen it stated by British travellers in the Moluccas, that the Dutch, about the year 1780, destroyed the clove trees in all those islands except upon one, in order that they might secure a monopoly in that particular spice. He should be glad to be informed whether the clove trade was entirely monopolised by that people, and whether the present supply was obtained from that one island which was exempted from the alleged destruction of the trees. He would also ask whether the distribution of the cocoa tree had been carried on to any extent in the islands of the South Sea by officers of the British navy, as had been suggested by Captain Flinders. It was quite true that whenever persons planted under such circumstances, others reaped the fruits; but they all knew the great use of the cocoa-nut, and if it were planted in those barren islands, it would prove of great value to subsequent voyagers.

Mr. W. S. MANNING, as the representative of Messrs. G. and J. A. Noble, a firm who had long been devoted to the flax and hemp trade, desired to make a few remarks. The subject was a very comprehensive one, so much so that much of interest and importance was of necessity passed by. In the matter of fibres, perhaps Mr. Simmonds had hardly done justice to their importance. Whilst devoting a somewhat lengthened description to the Ejoo fibre, which, although adapted to native, was probably hardly suited to European requirements, they had not heard of that "Prince of Palms," the cocoa-nut, which to some of the Asiatic Islanders was much more literally "the staff of life," than wheat was with us. The products of the Ejoo palm were positively not known in this country as an article of commerce, whilst from the latter, the *Cocos nucifera* or *Palma indica major*, of Rumphius, we received from 6,000 to 7,000 tons, in coir, yarn, fibre, rope, &c. Our supply at present was derived entirely from Ceylon, Cochin, and the adjacent islands—the Maldives and Laccadives. It luxuriated, however, on the shores of many of the islands of the Eastern Archipelago. The gentleman who had just sat down very aptly remarked that more attention should be paid to the propagation of the cocoa-nut tree, saying that too often "what was everybody's business was nobody's." Nature, however, had arranged for the distribution of this most useful palm. Wafted by wind and wave, the fallen kernel floated to distant shores, perhaps not inhabited by man, and throve most luxuriantly wherever it found a foot of soil. An enumeration of all the native requirements satisfied by this palm, it would be impossible to give; but baskets, combs, candles, cups, ladles, spoons, boats, sugar, yeast, vinegar, cabbage, milk, tiles, toddy, charcoal, torches, brooms, mats, and sails, were amongst them, besides copprah, or the compressed fruit, which, in addition to the immense native consumption, was largely exported to Indian ports. There were 1,491 tons of copprah shipped from Cochin alone, between 1st August, 1860, and 31st January, 1861. Cocoa nut oil was also a valuable product. Mr. Simmonds had spoken of Manila hemp, and the increase of the exports; if he had followed it to the latest advices, the extension was still more important. In 1856 the total shipments, as Mr. Simmonds stated, exceeded 22,000 tons; in 1859 they amounted to 26,625 tons, and last year they were 24,306 tons. The exports up to the 8th March this year reached 8,182 tons (of which there came to Great Britain, 4,271 tons), which, if continued in the same ratio, would give a total of almost 50,000 tons for the year. Prices had been during the last two years more than 25 per cent. lower than the average of the previous ten years. It appeared that the producers were greatly increasing the supply without an increase, but in the face of a heavy decline, in prices. Manila hemp was now very consid rably the cheapest and best of rope making materials. Machine made Manila rope had been proved to bear upwards of 59 per cent. more than the Government test applied to Russian hemp rope. It was, besides, 25 per cent lighter. The Admiralty at present took nothing but Russian hemp, for which they had perhaps an unusual partiality. With the above striking advantages, and a copious supply, the authorities would perhaps take a step in the right direction by allowing an Eastern product to have a share of their patronage, hitherto in this respect so jealously preserved for the Russians. Manila hemp was shipped at present only from the Philippines, but there was no reason why it should not be produced for us elsewhere. Around Singapore it throve, and in the Celebes it had received some attention. It could also be obtained from the continent of India. Mr. Simmonds did not mention the Rheea fibre, which ought, and one day would, be a staple product from these islands. The demand for it in this country was almost unlimited. There were many other fibres which, from the samples sent, and reports given of the possible supply, must shortly receive more attention. Our supply of flax was, and had long been insufficient; the price now was far higher than the average of 1854-5, when our

supply was so much interfered with by war. Indian flax would now soon be better known here. Many failures in the attempt to produce fibres were to be attributed to improper seed and cultivation. The Indian plant, always sown thinly, caused the stem to branch out, which rendered the fibre short. Acclimatised seed had produced fine flax in the Punjaub, upwards of 4 feet long, whilst the average length of the native plant was not much more than two feet. Great care and experience were also required, but with the rheea, moorva, and pine-apple fibre, perfection was, perhaps, more easily attainable. These were all indigenous to the Eastern Archipelago, and as we could not get flax, the 30 millions of people spread upon that vast expanse of fertile island might surely afford a good supply of valuable fibres as substitutes in return for the manufactures we were now sending, or were hoping soon, to send them.

Mr. JAMES HUNTER, whilst bearing his humble testimony to the great ability and industry displayed by Mr. Simmonds in the preparation of this paper, might be pardoned for alluding to one or two matters upon which he differed from that gentleman. With regard to consuls, he thought they were sufficiently numerous at present, and he should be sorry to see those establishments extended. It must not be imagined that the position of consul enabled those who held it to increase the trade of those islands. Trade required consuls, but consuls could not make trade. Mr. Simmonds had stated that the export trade of Singapore amounted to upwards of £3,000,000 annually, but he did not see why it should not amount to £50,000,000; and there had been coupled with that the observation that our trade with the Eastern Archipelago was more limited than it ought to be. If Mr. Simmonds had followed up that remark by pointing out the means by which that trade could be extended, he (Mr. Hunter) would have been glad to take the hint. As to the coffee grown in Sumatra, that was not owing to the industry of the inhabitants, but because the Dutch government compelled them to grow it. If Sumatra belonged to England, he did not think the inhabitants would be compelled to grow coffee, as was now the case. With regard to the proposition to add Sarawak to the number of British Colonies, he thought they had enough colonies already, and the greatest compliment they could pay to Sir James Brooke was to say, if he could not make the colony pay, nobody else could do so. Then it was said that the Island of Labuan produced 5,000 tons of coals annually. That would not pay half the salary of a Governor, and he did not think they wanted any more Labuans. With regard to cotton, if they did not continue to have it from America, he thought it would be a long time before they got any of that article from the Eastern Archipelago. As to the desirability of having naval establishments on the north coast of Australia, he thought they had quite enough of them all over the world. It would only be the grave of unfortunate officers, for it was a very unhealthy place, and there would be nothing for them to do when they got there. As to New Guinea, the climate was altogether so bad that no European gentleman who came back alive ever desired to go there again. The population was small, and hostile to Europeans. They had no wants; they went about naked, were complete savages, and did not know what commerce meant. The trade of New Guinea had not increased within the last fifty years, and he did not think it would do so in the next half-century.

Mr. E. W. TRENT expressed his regret that Mr. Simmonds had not informed them how the Manila hemp was prepared. It was a curious coincidence that, although this plant was known to exist throughout the tropics, yet Manila was the only place from which they received any supplies of that article. The time had come when this country must depend more than ever upon its manufactures and commerce, and it would be highly beneficial if intelligent men were sent out to various parts of the world to seek for the raw materials which were so largely in demand for our manufactures. With regard to the fibres of tropical countries, he thought one of the greatest difficulties they had to contend with was the bad way in which they were prepared and packed for exportation. Mr. Noble showed him upon one occasion some hemp from Turkey. In the state in which it then was it was scarcely saleable, but upon manipulation it produced a most beautiful fibre. It was sent to this country in a bad state, and it came into the broker's hands to be sold for what it would fetch. There was scarcely a fibre that they received from India and other places which was not greatly deteriorated in value from the imperfect way in which it was prepared and packed. The Bombay hemp, which was of itself a good article, came over to this country in such a state that one of his (Mr. Trent's) strongest workmen had been poisoned in working upon it, and it was only by paying exorbitant wages that the men could be induced to work upon it at all. He believed a complete revolution in these matters would be brought about by the introduction of proper machinery into India for the preparation of these materials. They had Russians and others coming over to this country and obtaining all the information they could upon this subject, whilst our own countrymen were content to remain apathetic upon it. He was convinced that if proper attention were paid to this subject, they might be independent of the continent for their supplies of hemp and flax. The paper trade was likely to be seriously affected by the export duty upon rags, and it would probably be the same with flax. They were just as likely to put an export duty upon that article, which would put an extinguisher upon the trade in this country. The loss of property during the Russian war was frightful to contemplate. Men who were worth from £50,000 to £100,000, through the sudden rise in the price of hemp, and wishing to keep their hands employed, were brought to bankruptcy; their valuable machinery was brought to the auctioneer's hammer, and was bought by brokers who could not pay the money down and were allowed long credit, and that machinery had been hawked about the continent to supply the demand which existed there. He thought the time was come when able practical men ought to be employed to travel to various countries where these valuable products could be obtained in great abundance, if under proper superintendence in the early stages of manipulation and preparation for sending to this country. He thought able papers, like that which had been presented to them that evening, ought not to suffice for the gratification and amusement of the moment, but ought to result in something being effected of a practical and useful character.

Mr. WILLIAM HAWES said, very contradictory opinions had been expressed in the course of this discussion. On the one hand it was argued that they ought to encourage trade with these portions of the globe by the establishment of consuls; and on the other hand it was said that the trade of those islands was not worth their attention; whilst the last speaker had urged that these districts should be further explored, and more information collected as to the nature of their products, and the means of transporting them to this country in such a condition as to be really available for our manufactures. This paper was one of a series on similar subjects which had been read before this Society, and they were of great utility. A mass of information had been presented which might not, perhaps, produce beneficial results at the present moment, but it was for those who were interested in the subject to consider it and turn it to useful account hereafter. That was the sole object of the paper that evening. It was only by the collection of information from all sources, and placing it in a well-arranged form before a meeting of this kind, and circulating it, through the medium of the *Journal*, that the public could be supplied with a knowledge of those subjects, so as to be able hereafter to turn the facts thus collected to a beneficial account. He thought Mr. Simmonds had

rather overdone the subject by the large amount of detail he had brought before them. From a vast collection of facts he had left them to draw their own conclusions. All Mr. Simmonds professed to say was, "There are immense districts of country with which we have at present comparatively little trade, but it is my opinion that with a proper amount of industry and attention a very large trade may arise." And what were the figures brought forward in support of that position? He would take one of the districts which had been spoken of as so little worth attention, Sarawak. He found that from 1854 to 1860 the tonnage of exports had increased from 9,000 tons to 15,000 tons, and the value from 600,000 dols. to 900,000 dols. They were aware of the adverse circumstances connected with that trade, and if such success was achieved in one particular district, they ought to give Mr. Simmonds credit for results equal to those which he anticipated would be arrived at if the whole of this vast region were opened out to British industry, and protection afforded from the depredations of the pirates. He thought the utmost attention being given to commerce in this quarter would repay the government for the expenses of consuls and naval establishments sufficient for the protection of the trade that might arise.

Mr. TRENT wished to bear his testimony to the zeal which the East India Company had for many years displayed in collecting various fibres available for the manufactures of this country. There had been an immense amount of zeal, but very little knowledge. He believed that £2,000 worth of machinery would create an entire revolution in the Indian fibre trade.

The CHAIRMAN said the question of piracy had been mentioned, and the people of Johore had been charged with organising those depredations by sea. Now, the fact was there were no pirates at Johore. It was subject to the native prince from whom they purchased—for he (Mr. Crawfurd) had purchased it out and out—the island of Singapore; and he was a good ally, or rather a subject, of the government of this country. He was glad to inform them that he was by far the richest prince in the whole Malay Archipelago, his income being probably some £15,000 a year, which would easily buy up all other Malay princes. He was living in a very comfortable way, was a discreet and temperate man, and entertained his European visitors in handsome style. He was, therefore, not likely to encourage piracy. But there was a time not very far back, when the people of Johore had a bad reputation, and the very name of Johore was still used as equivalent to "pirate." With regard to the spices, there was no monopoly of spices by the Dutch; there was now no cutting down either of clove or nutmeg trees. The nutmeg plantations of Banda were the property of the Dutch, but there was no monopoly there or elsewhere in the Dutch possessions. The nutmeg, which some people thought a great deal of, had been introduced into Benkulen, Penang, and Singapore, but, as far as that island and the Malaccas were concerned, it was a failure. A disease attacked the plant, and it did not thrive except with great care, and the produce was not worth the time bestowed upon it. He had predicted that the clove and nutmeg in our own possessions would never become rivals of those which existed in their native soil and climate. But we never could want an abundance of those spices. The consumption of them in this country, instead of increasing, scarcely kept pace with the growth of the population. There was a time when these productions were thought to be of prodigious value, but for his own part he thought them paltry in comparison with other staples of those countries. He had no respect for them except from the fact that the attempt to trace the spice islands led to the discovery of America by Columbus. On that account only he had respect for the clove and the nutmeg. A great deal had been said about flax fibres. The paper he (the Chairman) recently read before the Society was too lengthy to admit of his reading the whole of it, but there was a good deal of discussion upon it. The majority of the speakers were opposed to his views upon the subject of cotton supply. He thought he was right, and that the majority were wrong, but the discussion was carried to such a late hour that he had no fair opportunity of replying. With regard to flax, he would remark that they received an enormous quantity of seed from India but very little flax indeed. Why was that? Principally because the Hindoos were too unskilled to be able to prepare the fibre, but there was no reason that he knew of why India should not produce as good flax as Belgium. With regard to consuls, he thought some were, perhaps, overpaid, and did very little good; at the same time he was sure they did good in some places. A consul could not make trade, but he was necessary where trade existed. He was not aware that the consuls at Java received a salary. There were formerly three consuls at that important island, but two had been dispensed with, and the third was a merchant. He did not object to consuls being paid, but he did not approve of their acting as merchants in the places in which they held their office. He would now say a word or two with regard to the trade of this Archipelago. Having been engaged in the preparation of some statistics for the Colonial Office with regard to the trade of the Straits Settlements—Singapore and Malacca—he had compared it with the trade of the whole continent of India and the trade of Batavia. The possessions of the Dutch amounted to about two-fifths of the whole Archipelago. In speaking of the Indian trade, he found that the total amount of the trade of Bombay, exports and imports was £37,400,000 per annum; that of Calcutta, including the fertile valley of the Ganges, £32,500,000, that of Madras was only £9,000,000; whilst that of the Straits settlements amounted to no less than £14,800,000 per annum. So much for the trade of the Straits settlements as compared with that of the principal parts of continental India. The trade of Java amounted to £14,300,000, so that they found the trade of the little Straits settlements exceeded that of the important island of Java by about half-a-million sterling per annum. The trade of the Philippines was £7,000,000, or about half the value of the trade of Java, which made the entire trade of the Indian Archipelago upwards of £36,000,000 per annum, and those who lived five-and-twenty years longer, he had no doubt, would see that trade doubled in amount. There were a few articles of commerce which he would touch upon very shortly, one in particular, which he believed had been omitted by Mr. Simmonds, but it was one in which this Society had shown considerable interest—he alluded to gutta-percha. It happened that a medical gentleman travelling in that country, and seeing the manifold purposes to which gutta-percha was applied by the Malays, thought that it might be well adapted for splints, and other surgical appliances. He, therefore, collected a quantity of it, and, amongst others, sent a specimen of it to this Society, for which he was awarded the Gold Medal of the Society of Arts. He believed that was all the reward the discoverer of that wonderful substance ever received, for without that they would probably never have been able to communicate in five or ten minutes between St. Petersburgh and London. He found that the exports of gutta-percha amounted to between 900 and 1,000 tons a-year, representing a value of £156,000. The discoverer of that article was Dr. Montgomery, his (the chairman's) nephew. He would mention one other circumstance in connection with this subject. He had already stated that the only public recognition of Dr. Montgomery's discovery was the award of the gold medal of this Society; but after his death he left some sons to be provided for, and he was happy to say that his (the chairman's) application to the Board of Control was successful in obtaining through the present Lord Lyveden a cadetship for one of Dr. Montgomery's sons, on the ground of this discovery. Sago had become an important article of com-

merce, and it was to the Chinese they were indebted for the manufacture of it in its present improved state. Certain Chinese knowing that the English people were rather nice in their articles of food, set themselves to improve upon the brown ugly article that was at first supplied, and the preparation they now enjoyed was the result. The coal of Labuan Mr. Simmonds had not quite done justice to. It was of excellent quality. The working of it had been discontinued upon some estates, but a society of persons had now been formed to work this coal, and he had no doubt a large quantity would be raised. It surpassed in quality the coal of any of the Dutch settlements. In order to show the extent to which trade was increased by mere freedom, he could mention one circumstance. He went one day to the Board of Trade, and a gentleman who had rendered great service to this country in an official capacity—the late Mr. Porter—showed him a handfull of black-looking seeds, and asked if he could tell him what they were, when he referred him to the Arabian Nights, "Open Sesame." It was now largely imported into this country, and produced an excellent oil. The history of coffee most of them were no doubt acquainted with. That plant was known to the Arabians long before the discovery of America. A Dutch gentleman, who had taken a fancy to Batavia, requested that a few fresh coffee seeds should be sent to him. Some of these seeds had been planted in the Botanical Garden of Amsterdam, and some plants were raised in hot-houses there. A portion were sent out to him, and from those had sprung the supply of coffee which the European nations had since received. He had only one more article to mention, viz., antimony ore. Whilst he was administering the civil government of Singapore, he was not only the governor, but also the censor of the press and the writer of the leading articles in the newspaper, for there was nobody else to do it. He went one day into the bazaar and saw a lump of metal which he knew nothing about. He, in the first instance, thought it was galena, or lead ore, but he ascertained it was ore of antimony, which had been brought from Borneo—from Sarawak. A portion of the metal was smelted at the shop of a Chinese, and a small button was made. The Chinese, seeing that, tried to obtain tin and lead from it, but to no purpose. That ore was brought from Sarawak, and produced a very considerable revenue to Sir James Brooke. Our principal supply of antimony was derived from that country. With regard to Borneo, he begged leave to express a different view of it to what had been given by his friend on his right. He (the Chairman) thought it anything but an agreeable island. The very character of its inhabitants showed clearly that it had a stubborn soil and possessed no natural advantages, because if it had it was to be presumed, that having the same race of people as inhabited the contiguous islands, they would have kept pace with them in progress and civilisation, that they would have become decently clothed, and have made some advance in letters. Yet they had not done so, and were arrant savages to the present day. There were two little islands to the east of Java, with about one million of inhabitants, having a civilised population, carrying on a large trade, and a very respectable sort of people. He ventured to say that those two paltry little islands, which had not the thousandth part of the area of Borneo, contained as large a population as the whole of the latter island. It was a community of savages, cutting off people's heads, pickling them, and wearing them as ornaments. That portion of the population of Borneo who were tolerably civilised were all foreigners—the Malays were foreigners, and the Chinese, of course, were foreigners. He was satisfied it was the natural difficulties of the country that prevented the inhabitants of Borneo from improving in their condition in the same manner as the population of Java, Sumatra, and the Celebes had done. He begged, in conclusion, to propose a vote of thanks to Mr. Simmonds for his paper.

In reply to the inquiry of a member,

The CHAIRMAN added that there were many different plants, both in India and America, which produced india-rubber. It was abundant in the forests of almost every tropical country, and there were no reasons to apprehend any lack of the supply of that commodity.

The vote of thanks having been passed,

Mr. P. L. SIMMONDS said it would certainly be of some advantage, for the purposes of discussion, if the papers to be read were printed in advance in the *Journal*, so that the author might have the full benefit of all his facts and opinions being fully known and duly considered, whereas with a long paper, containing many figures and statistical facts, it was quite impossible to read it in full, or even if read, for the audience to follow closely the figures. In reply to the inquiries and observations of many of the speakers, he must follow the plan of Abernethy, who used to refer his patients to his book, so he must ask them to read his paper when published in the *Journal*. Therein they would find much of the information as to growth of spices, the culture and manufacture of Manila hemp, gutta-percha, and india-rubber, and Labuan coal, and other questions that had been started, but there were one or two remarks to which he desired to reply. Firstly, it was highly satisfactory to find, from the statistical facts adduced by Mr. Crawfurd, that his (Mr. Simmonds's) observations on the importance of the trade of the Indian Archipelago were fully borne out. If our Straits Settlements, which produced comparatively little or nothing themselves of commercial importance, were already the centre of such an amount of trade, what might not be looked for in a few years hence, when the resources of these fine islands became more largely developed? He could not agree with the speaker who had deprecated the services of consuls. It was true a great reduction was being made in our consular service, but it was questionable whether this was always effected in the right direction. He believed, even in new countries, an intelligent consular agent might do much to stimulate trade. And he would refer, as an instance, to the very valuable yearly consular reports which were now issued through the Foreign Office (although rather slowly), in which merchants, manufacturers, and shipowners would find an amazing account of valuable information as to the trade, resources and capabilities of different countries. Many a new article of commerce had been thus developed by one active mind, as had been so well alluded to in the case of gutta percha by the Chairman. He believed, when it became generally known that the particular species of plaintain which yielded the Manila hemp of commerce, could be propagated from the seed—and he believed the seed had already been distributed through the scientific director of Kew Gardens—the culture would be extended to many of our colonies. Although there was at present a decline in price for this material, in consequence of the disturbed state of North America, which had hitherto been the principal market, the value of the white rope and other fabrics made from it were, as had been observed by Mr. Manning, as yet but imperfectly appreciated, and its use might be largely extended from its being a light, strong, and durable textile material. With respect to the charge of pirate ships being fitted out from the Johore peninsula, which had been indignantly refuted by one speaker, he should be sorry if, from the vagueness of his observations, it should be inferred that the ruler of that country had any participation in, or cognizance of, such proceedings. Personally he could not speak on this matter, but, as a careful reader of the Singapore newspapers, he saw the statement frequently made that piratical craft did occasionally sally out even from creeks in the Straits of Malacca and around the Malayan Peninsula. They might be Chinese or other marauders, for aught he knew, and the name Johore, as Mr. Crawfurd had stated, might have become applied to them improperly. There was but one other point to which he would allude, and that was as to the soil and capabilities of Borneo. He thought it could scarcely be so unpromising as was repre-

sented by the Chairman, looking at the numerous and magnificent vegetable products, wild and cultivated, with which many of the tables before them were covered. True the natives might be averse to or incapable of cultivating products, although the latest accounts, as he had shown them, seemed to refute this, for they had entered upon sugar and sago culture, and pepper and tobacco were extensively grown, while cotton, coffee, and rice were also raised in small quantities. Now the large accession of population in Malays and Chinese which had been drawn there, would counteract the effect of the indolence or hostility of the native tribes. He was glad that the subject had been so thoroughly discussed, for that, as he had stated at the outset, was his main object in bringing it forward.

A large collection of Specimens, described at the conclusion of the Paper, were on the table. Maps and Diagrams were kindly contributed by the Royal Geographical Society.

The Secretary announced that on Wednesday evening next, May 15, a Paper, "On the Hythe School of Musketry Instruction in Rifle Shooting," by Mr. John MacGregor, would be read. On this evening Lord Elcho, M.P., will preside.

ARTISTIC COPYRIGHT BILL.

In the House of Commons, on Monday last, the 6th inst., the ATTORNEY GENERAL moved the second reading of this Bill.

Mr. WALTER—Sir,—I wish, before this Bill be read a second time, to call attention to one feature of it which appears to me to be open to serious objection, and which, in my opinion, requires the careful attention of the House. This is a measure, sir, of great importance, and yet I apprehend that few honourable members have taken the trouble to read its various clauses. It is a measure which, if passed in its present shape, will seriously affect everyone in the kingdom who may at any time become the purchaser of a modern picture. I shall not be presumptuous enough to criticise the construction of a bill endorsed with such weighty and influential names as those which appear on the back of the present measure, but still I may be allowed to observe that there is some slight want of harmony between the bill and its title. The Lord Chancellor recently stated in another place that the object of the bill was to protect artists against pirates and impostors. If the bill only went that length, if those objects were all which it proposed to carry out, I should be the last man to offer any objection to it, but if honourable members will look closely to its provisions, they will find that it goes a good deal farther. If they examine the third clause, they will find that the protection is extended to artists not only against pirates and impostors, but actually against every man who happens to be a purchaser of pictures. The third clause provides that "the author of every picture, work of sculpture, and engraving which shall be made, or for the first time disposed of after the passing of this act, and his assigns shall have the sole and exclusive rights of copying, reproducing, and multiplying such work, and the design thereof, by any means, of any size, and for any purpose, for the term of the natural life of such author and thirty years after his death." Now, if I read that clause correctly, the effect of it will be, that any person who purchases a picture, or according to the sixth clause, who may have purchased one seven years before the passing of the act, will be deprived of the power of permitting any friend to copy it, or of having it engraved himself. If these provisions should become law, it is certain that very few persons indeed will like to purchase works of art encumbered with such stringent conditions. In fact, I look upon the third clause as a serious infringement upon the liberty of the subject. We have been recently engaged in the discussion of a curious tenant-right bill, but it appears to me that to allow an artist, after he has sold a picture, to retain a copyright in it, and thereby to deprive the real owner of those rights which, according to common sense, he has purchased with the work, in my opinion quite surpasses that tenant-right bill in absurdity, and is about as unreasonable a proposition as ever was submitted to parliament. Although myself a great lover of the fine arts, my taste lies more in the direction of ancient than modern pictures, and, therefore, there is not much danger of my being personally affected by the operation of the bill, but if I were a purchaser of modern pictures, nothing would induce me to buy one which such conditions attached. The third clause I look upon as a great infringement upon the rights of property and the liberty of the subject, and if I wanted to have a picture copied, I should consider such an enactment as an unwarrantable interference with that liberty and those rights. Let us suppose a strong case. Suppose a person to order a portrait of himself, the natural supposition would be that to the owner of such a picture, the person who had commissioned and paid the artist, the copyright should belong; but according to the present bill, the artist is to retain the copyright, and the effect will be that any gentleman who may have his portrait painted and exhibited in the National Gallery, will be prevented having it photographed, and from having it copied or engraved for any purpose whatever. I therefore must repeat that I regard the third clause with jealousy and dislike, and I shall be glad to hear that it is not the intention of the Government to insist upon its insertion. So far as the bill protects artists against pirates and impostors, it shall have my cordial support, because I believe that every artist is entitled to the secure enjoyment of any copyright of which he may be the real owner. But I contend that neither artists nor engravers should be allowed to retain a right in any work of art which they have parted with for a pecuniary consideration. If the third clause be not altered in committee by the promoters of the bill, I shall take the liberty of proposing some amendments.

Mr. CONINGHAM—There are, no doubt, many objections which may be fairly raised against the bill, but the question is whether they do no not more fairly call for discussion in committee than on the motion for the second reading. The fifth clause, however, is so remarkable that I cannot allow it to pass without some observation. It provides that "no copyright shall be acquired in any work of fine art, or in the design thereof, until the name or monogram of the author or maker thereof shall have been legibly signed, painted, engraved, printed, stamped, or otherwise marked upon the face, or some other conspicuous part of such work." Why, there is nothing more easily imitated than a monogram, and therefore this clause in reality offers no security at all. If an artist, through forgetfulness or chance, should omit to put his name or monogram to a picture, in that case the fifth clause would deprive him of all copyright in his work. It is not the monogram which proves the work of the artist, but that skill and peculiarity of style which can never be imitated.

Lord FERMOY—Sir,—There are some portions of this bill to which I, also, must object. It has been prepared by the Attorney-General, no doubt in the interest and at the suggestion of artists, but in my judgment he has gone a little too far in his protective provisions. The sound principle and common sense of the thing is that if an artist part with a picture, or an engraver with a plate, the copyright forms a portion of the sale, and any attempt to legislate upon a different principle would only be inflicting injury on artists themselves by deterring the public from purchasing their works. Artists, like other men, must bring their wares into the market, and must depend upon the competition of buyers for their reward. If the law cripple the rights of purchasers, the latter are sure to diminish, and the result will be that works of art will not

command remunerative prices. My impression is that the bill, as it now stands, will create an injurious monopoly, and that it will also have the effect of keeping prints and photographs of some of our finest pictures out of general circulation.

Mr. LAYARD—Sir,—I should feel exceedingly reluctant to oppose this bill, having a great respect for the eminent artists whose suggestions it embodies, but I trust that the Attorney-General will give the matter some serious consideration before he asks the House to give it a second reading. The bill defines a design to mean a conception or an idea, or a composition, embodied in a work of art. Now, definitions, it is said, are always dangerous, but to define what is a composition, or an idea, or part of an idea, would, I believe, defy the logic of the Attorney-General himself. Again, who shall define the strict meaning of the word originality. If this bill had been law in ancient times, the great masters themselves would have been exposed to fine and imprisonment, for nothing is so difficult to decide as to what is original, or what has been copied in a work of art. Some of Raphael's finest pictures were copied, with slight variations, from preceding artists, and in art's most brilliant period, namely, the fifteenth century, the ideas of the artists of the fourteenth century were laid under frequent contribution. I believe that no gentleman would like to purchase a work of art saddled with such conditions as are here inserted, and therefore I do not think that the bill will be of any advantage to artists themselves. The great masters of antiquity, and their worthy modern successors, such as Turner and Reynolds, required no bill — their genius protected them from imitation. To say that artists retain a property in their pictures after they have sold them is simply absurd. If they had such property they could compel the purchaser to take care of their works, whereas the latter may as we all know, thrust all his pictures in the fire if it suits his fancy. Of course there might, in some cases, be a special contract, and then, of course, there would be special clauses and conditions, but, as a general rule, the power of a purchaser over his pictures is as I have stated. Of one provision of the bill I heartily approve, and that is the clause which makes the imitation of an artist's monogram a forgery, and treats it as a misdemeanour. That provision will give a legitimate protection to artists, but I do not see why there should be all this jealousy of photographing and engraving, because, in my opinion, the more paintings are engraved the better for the reputation of the artists. Looking at the bill as a whole, I am afraid that its effect will be to throw works of art rather into the hands of traders than of amateurs, and this would be a result which would not be at all calculated to promote our national progress in the fine arts.

The ATTORNEY GENERAL—Sir,—I had not anticipated any objections to this stage of the bill, and as those which have been urged refer entirely to details which can be discussed in committee, I am unwilling to trespass now on the attention of the House by making any general exposition of the objects we have in view. To some of the observations which have been made I must make some reply. The first objections were those of the honourable member for Berkshire, but I would suggest to that honourable member that he has forgotten the difference between the purchase of a picture and the acquirement of its copyright. It would be perfectly competent for the purchaser of a picture to propose to buy it out and out, when of course, he would give a proportionally enhanced price, and would have the indisputable right of dealing with his purchase as he liked. If, on the other hand, he bought the picture, simply as a picture, he would have the gratification and pleasure resulting from its contemplation; but was it right that he should have photographs and engravings made from it, using it for a different purpose from that for which the artist sold it, and interfering with the right of the latter to repeat his conception himself? If a person bought a book he could read it, but could not multiply copies of it, unless he purchased the copyright, and this was his reply to the objections of the honourable member for Berkshire, and of the noble lord the member for Marylebone. In many cases the remuneration of the artist arose from the power of engraving his picture, and it was quite clear that he could reserve that power if the purchaser did not choose to buy it along with the picture. Besides, the power of buying a coppright would be as great an advantage to the purchaser of a picture as to the artist, for how often does it happen that we see repetitions of works of art, and every repetition diminishes the value of the original composition. Collectors should recollect that this will be prevented by the present bill. In answer to the objection of the honourable member for Brighton, I must observe that it was necessary to define something the imitation of which should enable us to apply the criminal law, and that therefore the object of the provision referred to is to render the application of the law of forgery more easy, and likely to be successful. The honourable member seems to think that the value of the pictures would be degraded by the adoption of this provision, but is he not aware that all the ancient masters affix monograms to their most celebrated works ?

Mr. CONINGHAM.—I beg to assure the honourable and learned gentleman that I made no objection to an artist attaching his monogram to his pictures. I spoke in his interest, and pointed out that where he had forgotten to place his monogram his copyright would be lost.

The ATTORNEY-GENERAL—What I said was that under the bill it would be forgery to imitate the signature, but that was simply because the signature decided the evidence of ownership, and because without such a provision it would not be easy, or in fact practicable, to apply the ordinary criminal law. Of course where authorship could be proved by other means, the artist's rights would remain the same. Turning to the honourable member for Southwark, he surely must have met, in reading works upon the fine arts, with such expressions as " the idea present to the mind of the painter, and embodied in his picture," and " the conception of his work formed by the sculptor." I believe the fact to be that all painters and other artists work not directly from an extrinsic object, but from a conception which they have derived from such object, and which, having digested and completed in their minds, they endeavour to represent in their works. I do not see, therefore, that there need be any difficulty in finding language to protect the artist in the copyright of his conceptions. It is in fact the only mode in which you can secure to him the real ownership and property in that which constitutes the distinctive feature and character of his work. The honourable member also asked how part of an idea could be plagiarised, but the explanation is exceedingly easy. Let us suppose that the principal figure were taken from a great picture, or that portions of several works were collected in one design, and that this collection of stone and parts were reproduced as an original, then it would be easy to see how part of an idea might be pilfered. These are, however, difficulties which can all be cleared up and smoothed away in committee, where I shall be most happy to hear the criticisms and to receive the suggestions of the honourable member. The house must recollect that the bill before it is the first legislative attempt to do justice and to give protection to the artists of this country, whilst there is no other country in Europe in which such protection has not long since been secured. The hon. member's argument that artists would thrive best without protection, would apply with equal force to authors, and yet the right of the latter has long since received legislative sanction and protection. Why, then, should we refuse a similar protection to artists? It is admitted that everyone should have a property in that which is the work of his hands, but how much stronger becomes his vested right when that work is the conception of his mind embodied in a painting or a statue. Are we going to deprive the artist of his just and proper

protection, and that which is, after all, the highest and the noblest property in the world? The principle of protection is established with respect to the author, and it is high time that the artist should also taste its advantages. Parliament has extended the period during which property may be engaged in works of the mind when embodied in books, but let us remember that while a book speaks only to those who are conversant with the language in which it is written, the language of painting and sculpture is universal, and can be understood and appreciated all over the world. Let us, then, put the artist on the same basis of security as the author, and we shall see that this bill, if passed, will prove no more injurious to art than has the extension of the Copyright Act been discouraging to literature. Art and literature spring from the same source and stand on the same foundation. They have the same right to protection, and it would be an honourable distinction for this present session of Parliament, if it be signalised by the passing of an act of practical, though tardy justice in respect to works of art.

The bill was read a second time, and ordered to be committed on Thursday, the 9th inst.

MEETINGS FOR THE ENSUING WEEK.

MON. ...Geographical, 8½.
TUES. ...Royal Inst., 3. Mr. John Hullah, "On the History of Modern Music."
Syro-Egyptian, 7½. Mr. Ainsworth, "Ruins of Chaldæa."
Civil Engineers, 8. Continued Discussion upon "The National Defences."
Medical and Chirurg., 8½.
Zoological, 9.
WED. ...Pharmaceutical, 12. Anniversary.
Literary Fund, 3.
Society of Arts, 8. Mr. John MacGregor, "On the Hythe School of Musketry Instruction in Rifle Shooting."
Ethnological, 8½. Anniversary.
THURS...Royal Inst., 3. Mr. Pengelly, "On the Devonian Age of the World."
Zoological, 4.
Royal Soc. Club, 6.
Chemical, 8. Mr. W. H. Perkin, "On the colouring matters obtained from Coal-tar."
Royal, 8½.
Antiquaries, 8½.
FRI.... ...United Service Inst., 3. Lieut.-Col. H. W. Norman, "Warfare in India."
Royal Inst., 8. Professor J. C. Maxwell, "On the Theory of Three Primary Colours."
Royal Inst., 3. Prof. Max Muller, "On the Science of Language."

PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[*From Gazette, May 3rd*, 1861.]

Dated 15th February, 1861.

382. E. Poulson, 3, Strathmore-terrace, Shadwell, Middlesex—Imp. in velocipedes, applicable also for propelling carriages, barges, and boats.

Dated 22nd March, 1861.

728. C. E. Swindell, J. Russell, and J. Price, Withymoor, near Dudley, Worcestershire—Certain imp. in the manufacture of horse nails.

Dated 6th April, 1861.

850. R. Wallwork, Bolton-le-Moors, and T. Sumner, Farnworth, near Bolton-le-Moors, Lancashire—Certain imp. in machinery for preparing cotton and other fibrous substances.

Dated 10th April, 1861.

878. T. A. Weston, Birmingham—New or improved fastenings for fastening bands and belts and articles of dress, and for such other purposes as the same are or may be applicable to.

Dated 11th April, 1861.

892. T. Don, 10, Poultry, London, T. Smith, Tenter-lane, and L. Horsfield, Bank Foundry, Leeds—Imp. in the method of and apparatus for drying and preparing grain, seeds, or berries, for food and other purposes.

Dated 12th April, 1861.

904. J. Douglas, 255, Blackfriars-road—Imp. in kitchen ranges.

Dated 13th April, 1861.

906. J. C. Rivett, Farnworth, near Manchester—Certain imp. in machinery for carding cotton and other fibrous materials.

Dated 17th April, 1861.

938. T. Jones, Bolton-le-Moors, and G. Mallinson, Salford, Lancashire—Certain imp. in the manufacture of piled fabrics.

Dated 18th April, 1861.

947. C. Norton, Hanley-street, Birmingham—Imp. in the manufacture of ornamental eyelets.
948. H. Carstanjan, Cologne—Imp. in the apparatus for, and method of, increasing the illuminating power of gas.
949. C. Stevens, 31, Charing-cross—Improved bands for transmitting motion to machinery. (A com.)
950. H. Jones, Birmingham—Imp. in certain kinds of breech-loading fire-arms.
951. T. B. Wilkinson, Deptford—An improved means for securing a watch in the pocket of the wearer.
952. E. Morgan, Liverpool—Imp. in ships' and other pumps.
953. B. Brown and R. Hacking, Bury—Certain imp. in machinery or apparatus to be employed in preparing cotton and other fibrous materials for spinning, called "roving frames" and "slubbing frames."
954. J. Bryson, Worcester-street, Birmingham—Imp. in weighing machines.
955. R. A. Brooman, 166, Fleet-street—Imp. in producing photographic pictures. (A com.)
957. C. Jordan, Newport, Monmouthshire—Imp. in apparatus for drying the mould and cores used for iron or other castings.
958. M. Buchanan, Glasgow—Imp. in gloves.
959. J. H. Johnson, 47, Lincoln's-inn-fields—Imp. in electric telegraph apparatus. (A com.)
960. W. Benson, Heaham, Northumberland—Imp. in the construction of furnaces, for the better combustion of fuel and the prevention of smoke.

Dated 19th April, 1861.

961. A. F. Eaves, Birmingham—An imp. or imps. in the manufacture of the bezels or rings used in glazing the dials of clocks, barometers, and steam gauges, and for other like purposes.
963. J. M. Brierley, Manchester—Imp. in the manufacture of woven fabrics, applicable to crinoline skirts and petticoats or other similar articles.
965. R. Maclaren, Glasgow—Imp. in jointing or connecting pipes.

PATENTS SEALED.

[*From Gazette, May 3rd*, 1861.]

May 3rd.	
2719. W. Jones.	2740. R. A. Brooman.
2725. C. Asprey.	2743. W. E. Newton.
2728. J. Higgins and T. S. Whitworth.	2748. J. P. Fittère.
2729. T. W. Smith.	2750. W. F. Henson.
2735. J. Clark.	2760. J. W. Wallis.
2737. J. and E. Ratcliff.	2885. S. Walker, jun.
	2906. G. Ennis.
	2932. R. Offord, jun.

[*From Gazette, May 7th*, 1861.]

May 7th.	
2749. H. J. Distin & A. H. Siebe.	2793. T. A. Blakely.
761. J. Chesterman.	2802. A. Henry.
2765. F. Trouvé.	2817. E. B. Wilson.
2766. T. B. Daft and W. Pole.	2924. N. Ager.
2767. J Glen.	2945. R. Dawbarn.
2768. E. B. Wilson.	2963. E. T. Hughes.
2770. F. Walton.	3031. W. E. Newton.
2775. M. A. F. Mennons.	3079. W. E. Newton.
2776 M. A. F Mennons.	7. D. A. Johnson.
2277. M. L. Henrionnet & L. O. Bobtique.	375. G. Searby.
2778. M. A. F. Mennons.	484. J. Howard and E. T. Bousfield.
2781. W. Roberts.	685. J. J. O. Taylor.
2783. J. Juckes.	693. T. Brooks.

PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

[*From Gazette, May 3rd*, 1861.]

April 29th.	*May 1st.*
965. E. T. Hughes.	992. W. E. Newton.
April 30th.	
972. J. H. Johnson.	

[*From Gazette, May 7th*, 1861.]

May 2nd.	1007. W. Heap.
985. J. Taylor.	*May 4th.*
1043. I. L. Bell.	1017. W. Wallis, W. Langford, and J. Slack.
May 3rd.	
989. J. Swain and M. Swain.	1038. R. B. Goldsworthy.

PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

[*From Gazette, May 3rd*, 1861.]

April 30th.	*May 1st.*
974. W. Macfarlane.	1032. C. B. Normand.

[*From Gazette, May 7th*, 1861.]

May 2nd.	*May 4th.*
996. M. Poole.	1015. J. G. Jennings.
May 3rd.	
1006. E. Haseler.	